PHD Policy Paper-V

August 2006

The North Versus the Rest
Where Do We Stand Today? And Where Will We Go Tomorrow?

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PHD PUBLICATIONS

PHD POLICY PAPER No. I

North Indian Common Economy (NICE) : *Removal of Inter State Trade Barries*

This research paper highlights the impediments to free flow of trade among the states in the north and the desirability to make optimum use of natural resources of power and water for the common benefit of people in the region. This policy paper focuses on disparities in the rate of state VAT on various commodities in spite of the consensus amongst the states to adopt common rates of VAT. A reference has also been made to the disparities in taxation relating to tourism, agri-produce and transportation with specific examples. Power sector reforms are also included.

PHD POLICY PAPER No. II

The South Asia Free Trade Agreement (SAFTA)*: With a focus on India-Pakistan Trade*

This paper analyzes the internal trade between the South Asian Free Trade Agreement (SAFTA) members (India, Pakistan, Bangladesh, Nepal, Bhutan, Sri Lanka and Maldives). The trade between India, Pakistan and Afghanistan has been examined separately. The paper concludes by suggesting the way forward and implementation of the SAFTA agreement.

PHD POLICY PAPER No. III

Indian Education Sector : *Growth and Challenges*

This paper analyzes the developments in the Indian education sector since Independence. It focuses on government expenditure, primary, secondary, higher, vocational and technical education. The second part of the paper mainly tries to answer the question where do we want to go in the changed international scenario and liberalization of education sector all over the world. This paper concludes by suggesting some policy options for the government, regulatory agencies and the private education providers in the country.

PHD POLICY PAPER No. IV

Indian Industry: *Concerns, Issues and Challenges*

This paper describes the new challenges and opportunities for the Indian manufacturing industry. Analysis includes the sector contribution to GDP, labour cost advantages, need for labour reform, import duties, domestic indirect taxes, export incentives, export subsidies and the FDI procedures.

The paper concludes with graphic presentation of selected economic indicators.

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Chapter 1

The North Versus the Rest
Where Do We Stand Today? And Where Will We Go Tomorrow?

Bibek Debroy[1] and Laveesh Bhandari[2]

Introduction

To state the obvious, India is a large and heterogeneous country. There are wide divergences in development and in deprivation. Such disparities also exist in other large economies, the United States and China being two ready examples. One obtains an imperfect understanding of what is happening in North-West China if one only visits Shanghai and Pudong. Nor is New Orleans representative of the rest of the United States. A visit to a Gurgaon mall won't tell us much about rural Bihar. There are also divergences or disparities based on individual characteristics, caste, class and gender. These are indeed exceedingly important. But that's not the focus of this monograph. Instead, this monograph focuses on divergences and disparities that are region-based. More specifically, how does the North of India compare vis-à-vis the rest? Implicitly, one understands the expression North, in contrast to East, West or South. But it is best to make this implicit understanding precise. By the North, we mean the States of Chhattisgarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Punjab, Rajasthan, Uttaranchal and Uttar Pradesh. With Chandigarh included. This is the geographical area PHDCCI works in.

There are different ways to look at the economic geography of a country, depending on the administrative division one has in mind. State administrative boundaries are natural dividing lines to use. Academic work and popular impression have often used the BIMARU (Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh) nomenclature, with a pun on the word *bimar*, meaning ill or sick. While this is still useful as a starting-off point, the States of Bihar, Madhya Pradesh and Uttar Pradesh have now been sub-divided and Orissa is often worse than some of these 4 traditional BIMARU States. BIMARU thus becomes BIMAROU, not to speak of deprivation, according to some indicators, in Jammu & Kashmir and the North-East. Although undivided Madhya Pradesh and Rajasthan are no longer as deprived and backward as Bihar and the eastern parts of Uttar Pradesh and Uttaranchal is better off than Uttar Pradesh, many of these traditionally backward areas tend to be concentrated in the North. In understanding India's development, especially after the 1991 reforms, one thus tends to often use a North-South framework. Contrary to the international usage of North as developed countries and South as developing countries (or least developed countries), the Indian perception has the North as under-developed and the South as developed. Two simple explanations are often used to explain this phenomenon. First, in the pre-1991 era, when licensing and proximity to the centre that granted licenses was important, the North performed relatively better. With licensing having disappeared, at least for manufacturing, this relative advantage has vanished and the South has come into its own. Second, given the inadequacy of internal transport infrastructure, coastal regions, where this inadequacy is less manifest, tend to flourish. While both these arguments have a grain of truth, and property rights that govern land are also important, this monograph will subsequently demonstrate that this North-South dichotomy is a trifle too simplistic. As is the East-West dichotomy, with a dividing line vertically drawn between Kanpur and Chennai, regions to the West of this line performing better than regions to the right.

Indeed, the use of State boundaries to facilitate our understanding is itself somewhat flawed, since development and deprivation do not follow such administrative distinctions. However, there is an in-built bias in favour of using States, since data problems are easier to handle then. Data problems become more difficult to overcome if one thinks of India's regions, or even districts and villages. Of India's 600 districts, around 100 are truly backward, by any objective criterion. The National Food for Work Programme had a list of 150 backward districts, the Rashtriya Sama Vikas Yojana (RSVY) increased the number to 167 and the National Rural Employment Guarantee Act has a list of 200 backward districts. Similarly, out of India's 600,000 villages, around 125,000 are truly backward. These are issues we will come back to. The usual discussion is not only about relative deprivation *per se*, but also about whether

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[2] Director, Indicus Analytics.

disparities have increased (divergence) or decreased (convergence) after 1991. The answer is invariably a function of the indicator used to measure divergence or convergence and of the aggregation method followed if there is more than one indicator.

Both the authors, jointly, and sometimes jointly with other authors, have worked on such questions, sometimes for other organizations.[3] This monograph draws freely on that earlier work, with acknowledgements in appropriate places. However, this is deliberately meant to be a reader-friendly and non-academic monograph. Therefore, footnotes and bibliography have been reduced to a bare minimum.

The Rest of the Volume

Chapter 2 draws from our work done for *India Today* on how the States are performing on a wide variety of indicators. Chapter 3 looks into how economic growth in various States is panning out in the 2000s and draws from work done jointly with Sumita Kale and Siddhartha Dutta. Chapter 4 looks into intra-State variation in economic growth and development levels. Chapter 5 discusses issues related to governance, specifically on economic freedom levels in different States of the country. Chapter 6 looks specifically into deprivation levels and draws on work done separately with Amaresh Dubey, Sanjay Tiwari, Peeyush Bajpai, Aali Sinha and Mridusmita Bordoloi. Chapter 7 delves into manufacturing corridors in India (with Dripto Mukhopadhyay). The last chapter borrows from 'How are the States Doing' in 2002 and provides a description of the economic conditions of major States.

Chapter 2

An Overall Picture of the North[4]

To obtain an overall picture of the North versus the Rest, there are two broad methods one can follow. First, one can administer questionnaires to respondents. Although cross-country comparisons in various reports often use such questionnaires, this has the obvious disadvantage of subjectivity. There is an inherent presumption that respondents know equally well about the various countries (or States). This is unlikely to be true and it becomes impossible to correct for this bias. In addition, subjective responses depend on the questions asked and are at best ordinal ranks. Conversion of these ranks into scores and cardinal measurement is somewhat suspect. A second approach is to use objective data. The data reported in this monograph are objective data, avoiding subjective responses entirely. They are also Central government data, obtained from official sources and therefore avoid the problem of non-comparability of data across various States. The use of objective data is naturally constrained by the problem that one cannot include variables on which such quantifiable, measurable and objective data are not available. Yet, a third method, used in cross-country rankings, is to splice together objective and subjective data. Because of caveats associated with subjective data, that too is avoided.

The next step is to identify parameters or heads to rank the North vis-à-vis the Rest. In our reporting, we will club the variables under eight different heads – (1) prosperity and budget; (2) governance; (3) health; (4) education; (5) consumer markets; (6) agriculture; (7) infrastructure; and (8) investment.

But before that, the populations in the North, as per 2003 estimates based on the 2001 Census, are 21.5 million in Chhattisgarh, 14.9 million in Delhi, 22.2 million in Haryana, 6.3 million in Himachal Pradesh, 10.6 million in Jammu & Kashmir, 63.1 million in Madhya Pradesh, 25.2 million in Punjab, 59.4 million in Rajasthan, 8.8 million in Uttaranchal, 173.9 million in Uttar Pradesh and 1 million in Chandigarh. The North thus accounts for 38% of India's population.

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[3] Confederation of Indian Industry (CII), *India Today*, *Outlook*, Friedrich Naumann Stiftung (FNSt), Rajiv Gandhi Institute for Contemporary Studies (RGICS), International Development Enterprises (IDE) and the Twelfth Finance Commission are instances.
[4] This section draws on the *India Today* "State of the States" ranking for 2005.

The decadal (Census 1991 to Census 2001) rate of population growth is high throughout the region. While the decadal rate of population growth for the country is 21.34%, it is below this figure only in Chhattisgarh, Himachal Pradesh and Punjab. With 29.04%, 28.33% and 26.8% respectively, Jammu & Kashmir, Rajasthan and UP have very high rates of decadal growth. And there are even higher decadal rates of growth, not to be confused with natural growth in population, of 40.33% in Chandigarh and 46.31% in Delhi. The geographical coverage of the North also varies enormously, from a very large area in Madhya Pradesh, Rajasthan and Uttar Pradesh to a very small area in Chandigarh. This is mirrored in a small population density in Jammu & Kashmir (99 per sq.km) to high figures in Delhi (9294) and Chandigarh (7903). Collectively, the North accounts for 44% of India's geographical area, 56% of agricultural production, 45% of GDP, 30% of industrial output, 32% of export-oriented units and 40% of small-scale units.

2.1 Prosperity and Budget

To get into the details now, under the prosperity and budget head, variables included are percentage of people below the poverty line, percentage of urban population, per capita capital expenditure in State budgets, the GDP deflator as an indicator of inflation, per capita State domestic product, per capita debt burden of the State and per capita revenue of State Electricity Boards (SEBs). Variables are normalized, that is divided by a denominator, to enable comparisons across regions with greatly varying sizes to be made. For instance, the percentage below the poverty line (BPL) in 1999-2000 was 40.54% in Chhattisgarh, 8.23% in Delhi, 8.74% in Haryana, 7.63% in Himachal Pradesh, 3.48% in Jammu & Kashmir, 36.16% in Madhya Pradesh, 6.16% in Punjab, 15.28% in Rajasthan, 15.2% in Uttaranchal, 31.6% in Uttar Pradesh and 5.75% in Chandigarh. Judged by this criterion, while there are relatively prosperous areas like Delhi, Haryana, Himachal, J&K, Punjab and Chandigarh, and those like Rajasthan and Uttaranchal that are roughly in the middle, there are also regions like Chhattisgarh, MP and UP. Urbanization is usually correlated with development and urbanization figures (2001 Census) are 20.1% in Chhattisgarh, 93% in Delhi, 29% in Haryana, 9.8% in Himachal Pradesh, 24.9% in Jammu & Kashmir, 26.7% in Madhya Pradesh, 33.9% in Punjab, 23.4% in Rajasthan, 25.6% in Uttaranchal, 20.8% in Uttar Pradesh and 89.8% in Chandigarh. Per capita capital expenditure in State budgets (2003-04) varies from Rs 4,700 per person in Chhattisgarh to Rs 17,370 in Delhi. Per capita State domestic product (SDP) (2002-03) varies between Rs 8,241 in Chhattisgarh and Rs 32,166 in Chandigarh. Additional figures are unnecessary. On the prosperity and budget head, one forms the impression that while there are considerable variations within the North, the North doesn't perform too badly.

This impression is reinforced by the map that follows. This map is based on a composite index for the prosperity and budget head, obtained by aggregating the variables included in this category through equal weights. There are other methods of weighting, but they do not change the overall picture. Darker areas in the map indicate States that are doing well, while lighter shades denote deprivation. The map reinforces our general impression. There are regions in the North (Punjab, Haryana, Himachal, Delhi, Chandigarh, Jammu & Kashmir) that do as well as any other part of the country under this head. Rajasthan and Uttaranchal don't perform as well as the South, but are superior to much of the East. However, what pulls the North down is UP, MP and Chhattisgarh.

Macro Economy
Index Value

- 2.42 - 5.30
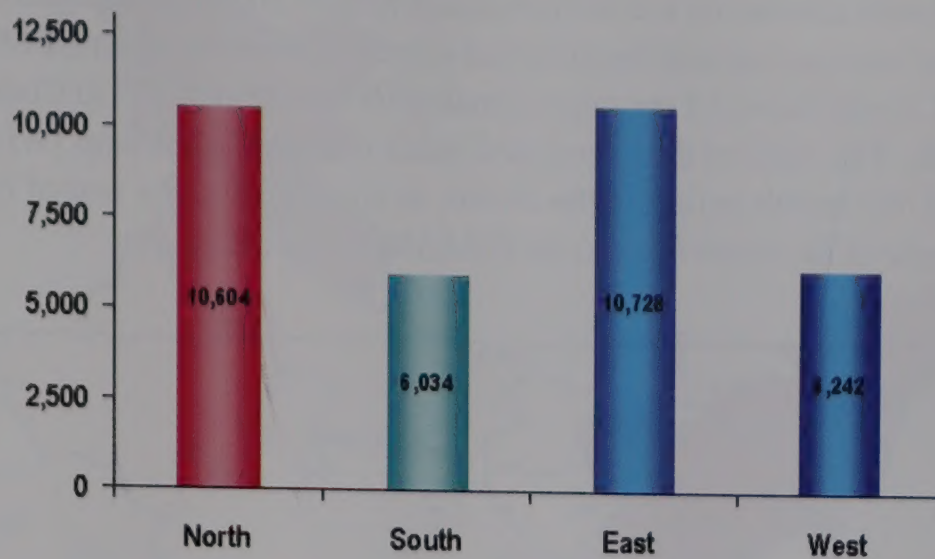- 2.00 - 2.42
- 1.50 - 2.00
- 0.84 - 1.50
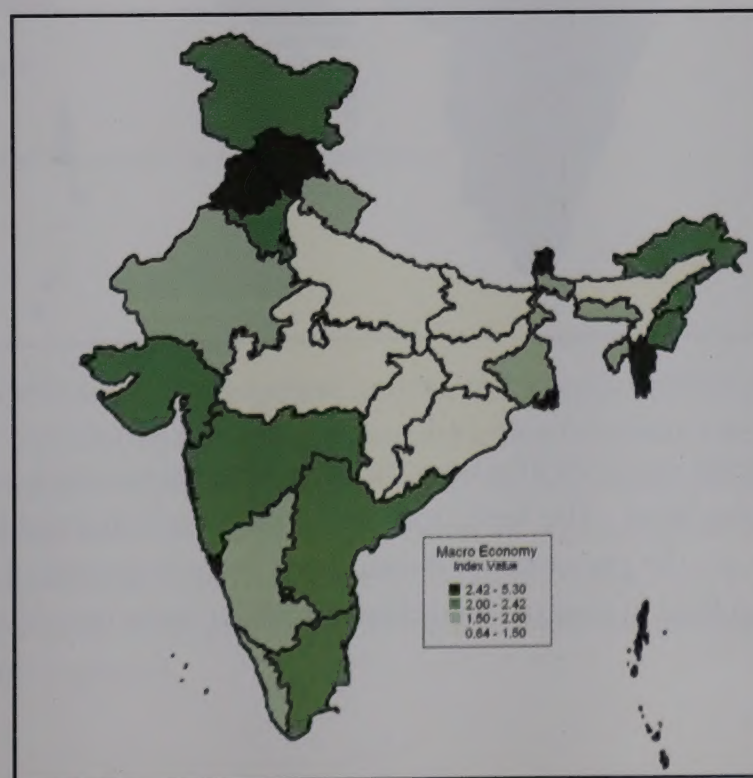
2.2 Governance

The next head we want to focus on is governance. What determines growth and prosperity is a matter of debate under the broad ambit of developmental economics. But one explanatory variable that is felt to determine growth and prosperity is felt to be governance, although one must be careful, because governance means different things to different people. At the core of any governance definition is some notion about the role of the government, such as in areas like law and order, protection of property rights, ensuring an efficient framework for resolution of disputes and taking care of market failure in some areas of physical and social infrastructure. Many governance definitions also bring in elements of interface between citizens and the government, or enterprises and the government, and as such, seek to capture decision-making processes, which are often difficult to quantify and measure. In our attempt to capture governance, we seek surrogate indicators like number of policemen per lakh population, cases filed and pending cases in district and lower courts and cases like murders, kidnappings and rape and molestations.

In common perception, these variables can be called law and order, other aspects of governance being difficult to quantify. For instance, in 2003, the number of policemen (only civil ones) per lakh population varied from 50.7 in Chhattisgarh to 367.1 in Chandigarh. As before, these variables are aggregated with equal weights to obtain a composite governance or law and order index. This is shown in the map. Darker areas connote higher values of the index. Compared to the South, particularly Tamil Nadu, Karnataka and Kerala, and with the exception of Rajasthan, the map depicts the law and order problem in the North very clearly. This is moderately serious in Punjab, Haryana, Uttaranchal and Chhattisgarh and extremely serious in Jammu and Kashmir and UP. The fact that Bihar, Jharkhand and parts of the North-East perform equally badly is no consolation.

Governance
Index Value

■ 1.35 - 4.20
■ 0.98 - 1.35
■ 0.32 - 0.98
  0.04 - 0.32
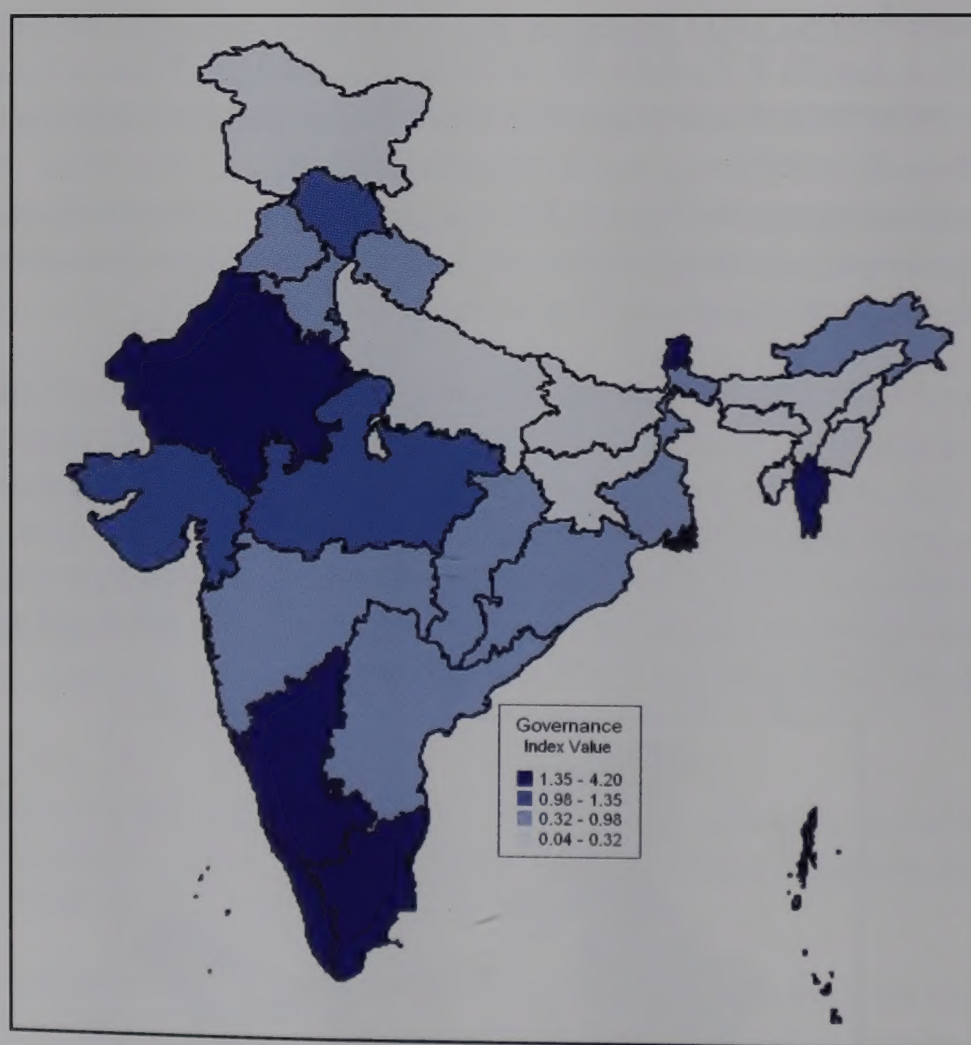
The two graphs that follow illustrate more vividly how the North performs vis-à-vis the other three regions of the country, the South, the East and the West. The first, not normalized and adjusted for size, shows the incidence of murder in 2004. The second, shows the percentage of cases that were disposed of in 1998. The message is clear. Though it is marginally better than East in case of incidence of murder but it is evident that there is a serious law and order issue in the North.

Incidence of murder

Bar chart titled "Incidence of murder" with y-axis from 0 to 12,500 and regions North, South, East, West:
- North: 10,604
- South: 6,034
- East: 10,728
- West: 5,242

Source: *Crime in India 2004*, National Crime Records Bureau.

Percentage of cases disposed

Bar chart titled "Percentage of cases disposed" with y-axis (%) from 0 to 60 and regions North, South, East, West:
- North: 37
- South: 50
- East: 51
- West: 40
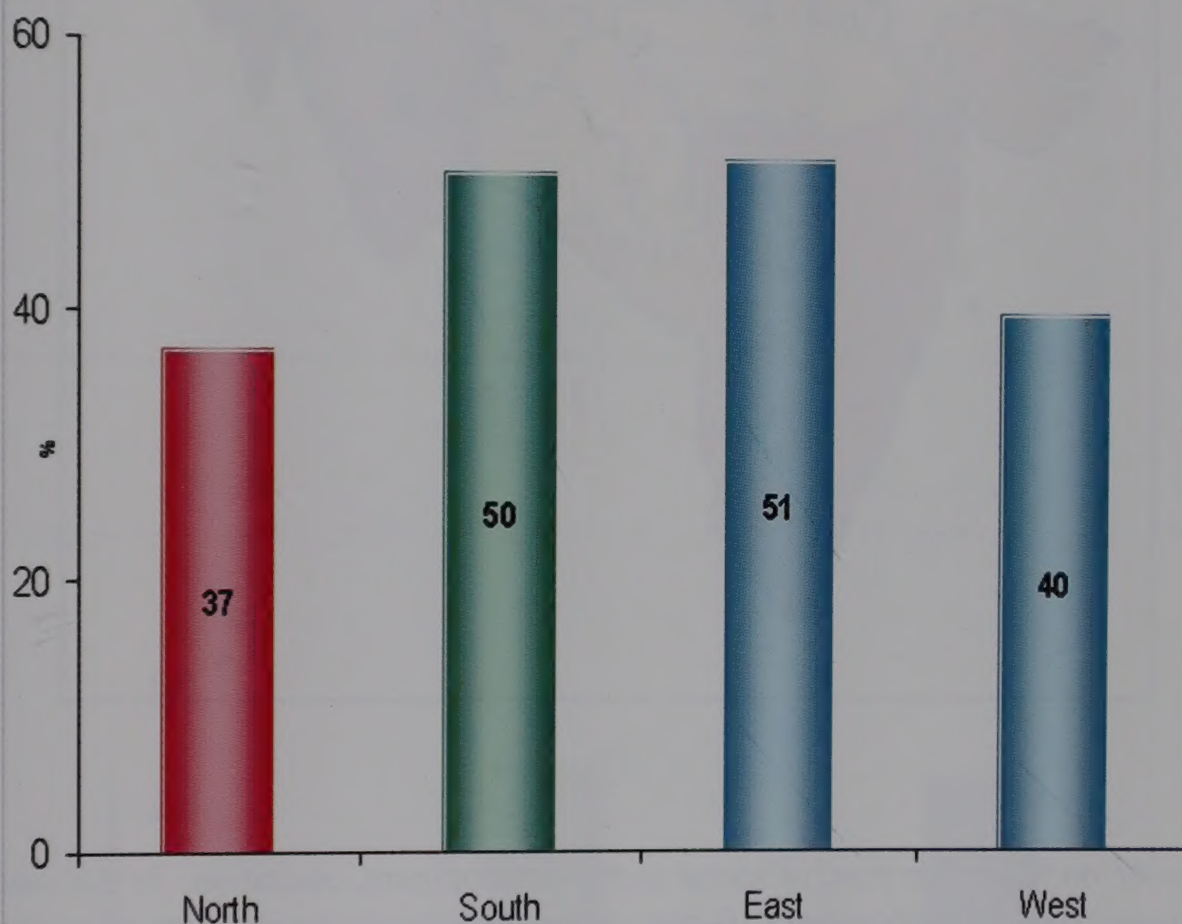
Source: *The Law and Economics of Dispute Resolution in India*: Arnab Hazra, 2003

2.3 Health

Human capital and its quality are critical for development and our third head captures one aspect of social infrastructure, namely, health. Among variables included in this category are the infant mortality rate, the ratio of male to female infant mortality rate (as an indicator of female infanticide, if not foeticide), the percentage of births assisted by trained personnel, the percentage of homes that have tap water as the principal source of water, registered doctors per million population, the sex ratio and per capita expenditure on health and family welfare by the State government. Mortality, and some aspects of morbidity, preventive health care, public spending and even the quality of public health services (in an indirect way) are thus sought to be captured.

The all-India infant mortality rate may have been 66 per thousand in 2001, but the figure was 86 for MP (undivided), 80 for Rajasthan and 83 for UP. The ratio of male to female infant mortality rates was 0.74 in Haryana and 0.58 in Punjab. The percentage of births assisted by trained personnel was 27.10 in Chhattisgarh, 33.10 in Uttaranchal and 28.70 in UP. Households that have tap water as the principal source of drinking water is only 15.49% in Chhattisgarh. As is well known, the 2001 Census showed a sex ratio (females/1000 males) of 773 in Chandigarh, 821 in Delhi, 861 in Haryana and 874 in Punjab. The value of the aggregated index is shown in the map. With the exception of Jammu and Kashmir and Himachal, the health deficit in the North, as compared to the rest of India, is obvious. At least according to this criterion, most of the North fits into the BIMAROU classification.

Health
Index Value

- 2.40 - 4.18
- 1.70 - 2.40
- 0.87 - 1.70
- 0.30 - 0.87
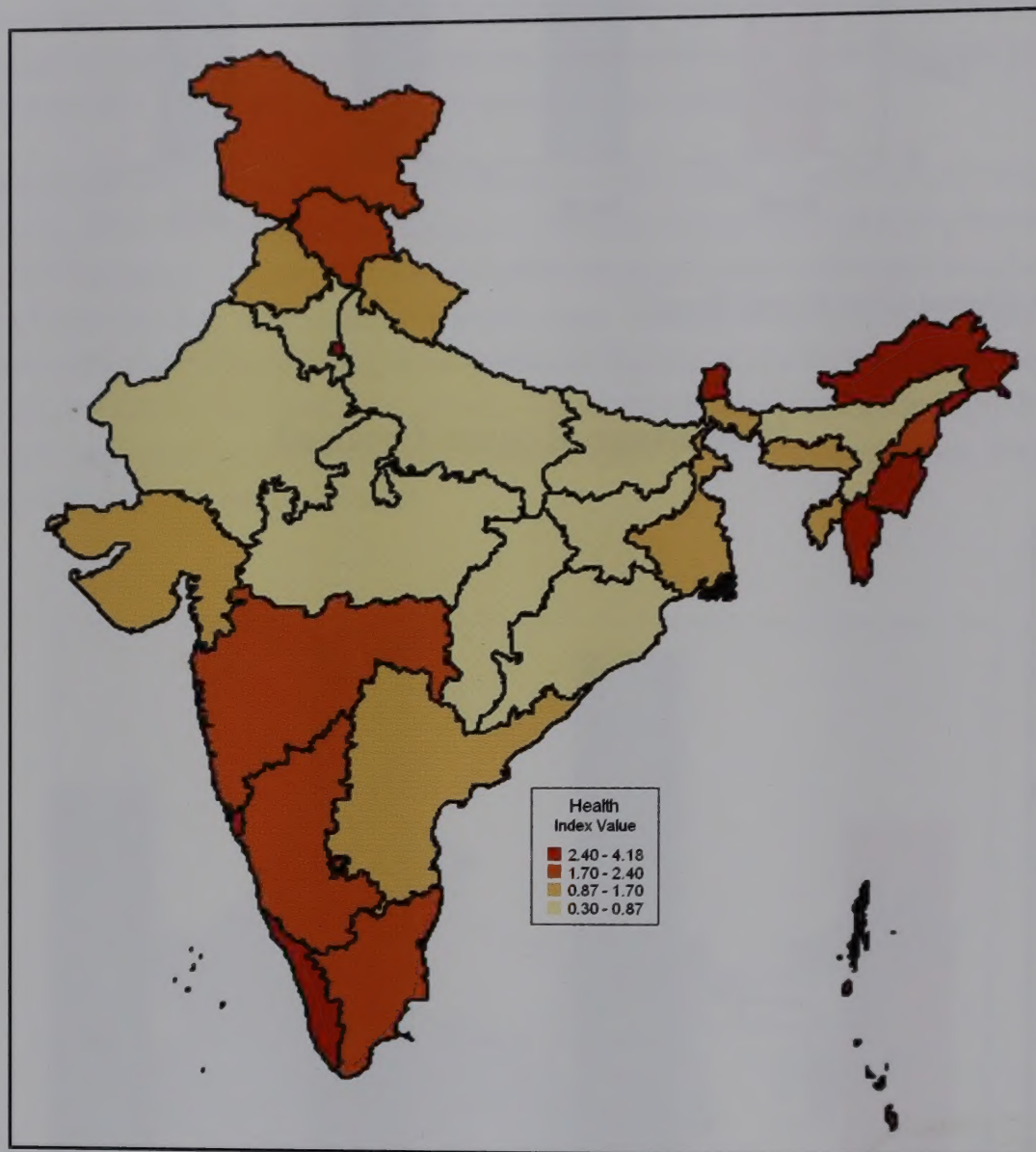
2.4 Education

From health, we move on to another head of social sector development, education. In this category, we include variables like the literacy rate, the proportion of 10-plus children who have completed primary education, the ratio of girls to boys enrolled in elementary school, the teacher/pupil ratio and expenditure on elementary education (per child in the 6-14 age-bracket). The focus is thus on school education, though not exclusively so. Literacy rates (2001 Census) vary from a low of 54.50 in Jammu and Kashmir to a high of 81.80 in Delhi and Chandigarh. The percentage of 10-plus children who have completed primary education is low throughout India (1998-99) data, but is especially low at 25.61% in Chhattisgarh, 28.14% in MP, 25.72% in Rajasthan and 25.68% in UP. The ratio of girls to boys enrolled in elementary education is only 0.74 in Rajasthan. The teacher/pupil ratio in the North may not be as low as in Bihar or Jharkhand, but is not particularly high either. Finally, the per child public expenditure on elementary education may be high in HP and Uttaranchal, but is very low in MP, Chhattisgarh and UP. As before, these variables are aggregated into a composite education index shown in the map. The map reinforces what we have already said. In the bulk of the North (Haryana, Rajasthan, UP, MP, Chhattisgarh), there is a serious education problem. The map suggests that this is a school education problem, but as the succeeding four (non-normalized) graphs show, this is an overall education problem. Indeed, there is a vocational education and skill-formation issue as well.

Education
Index Value

■ 3.80 - 6.50
■ 3.00 - 3.80
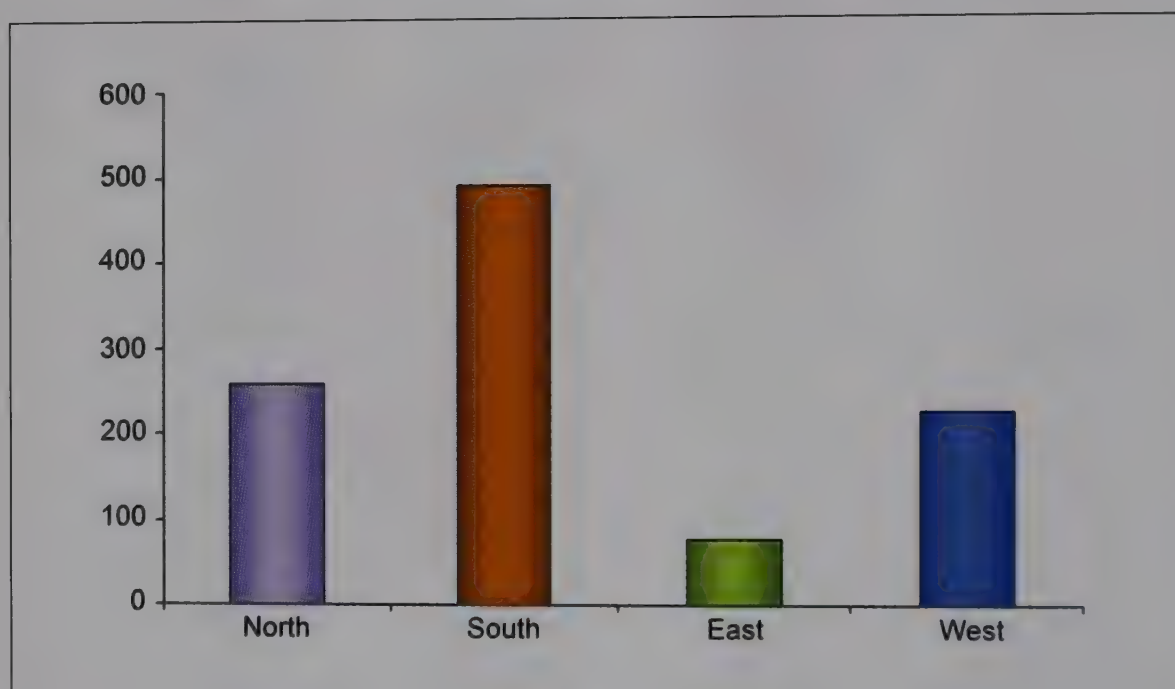■ 2.37 - 3.00
□ 0.60 - 2.37
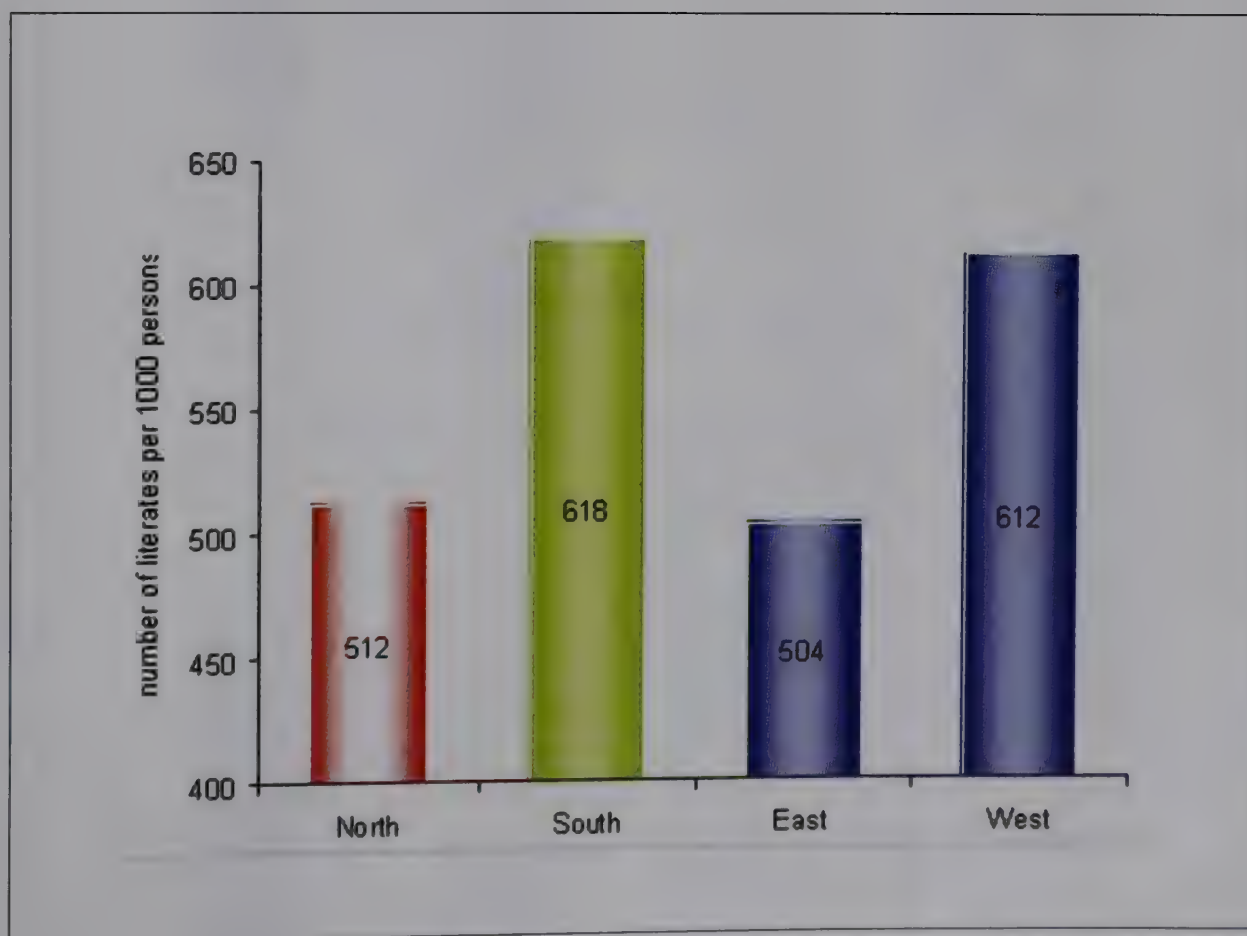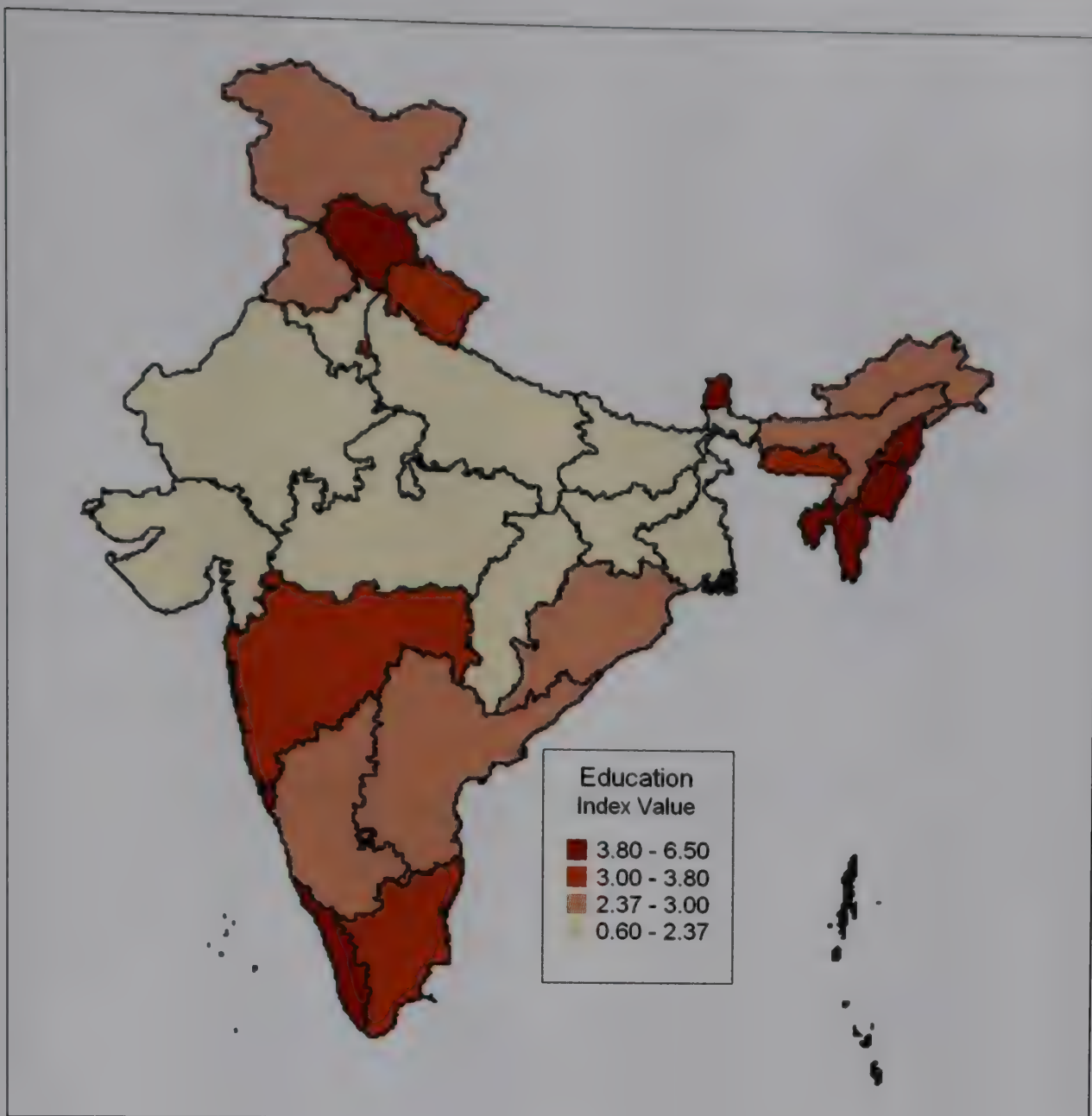
Total number of seats in degree engineering colleges
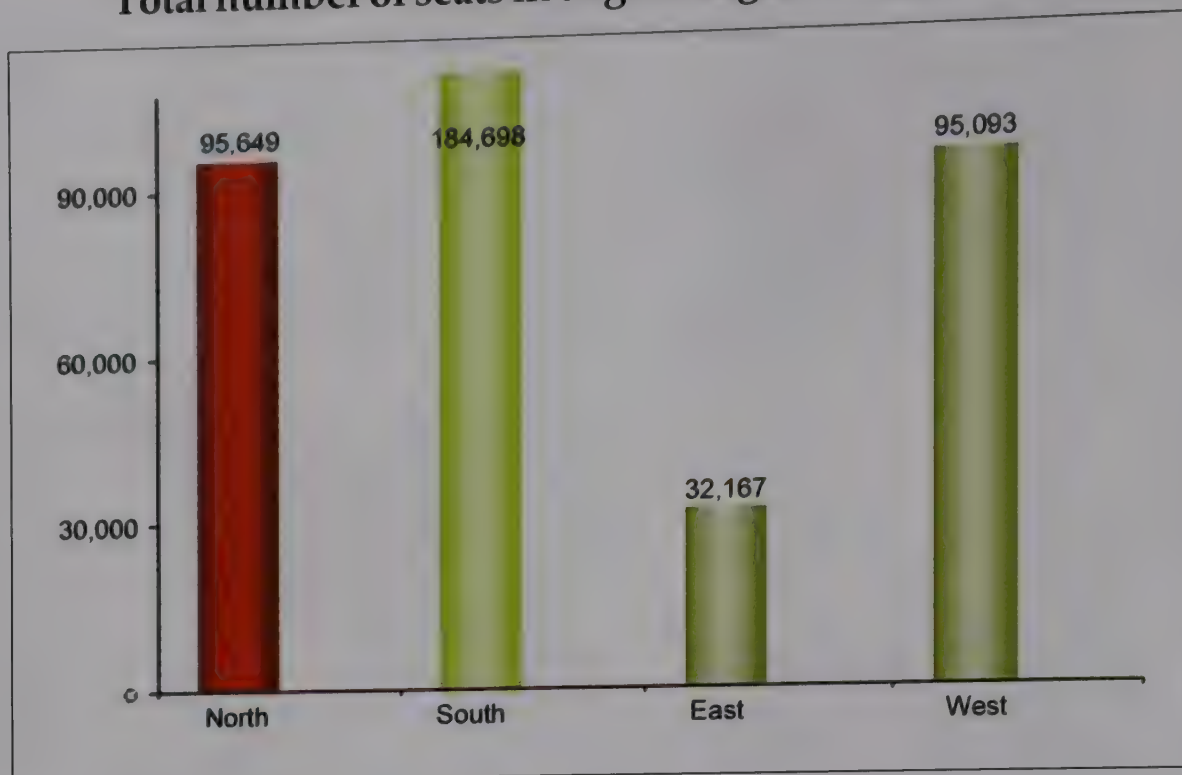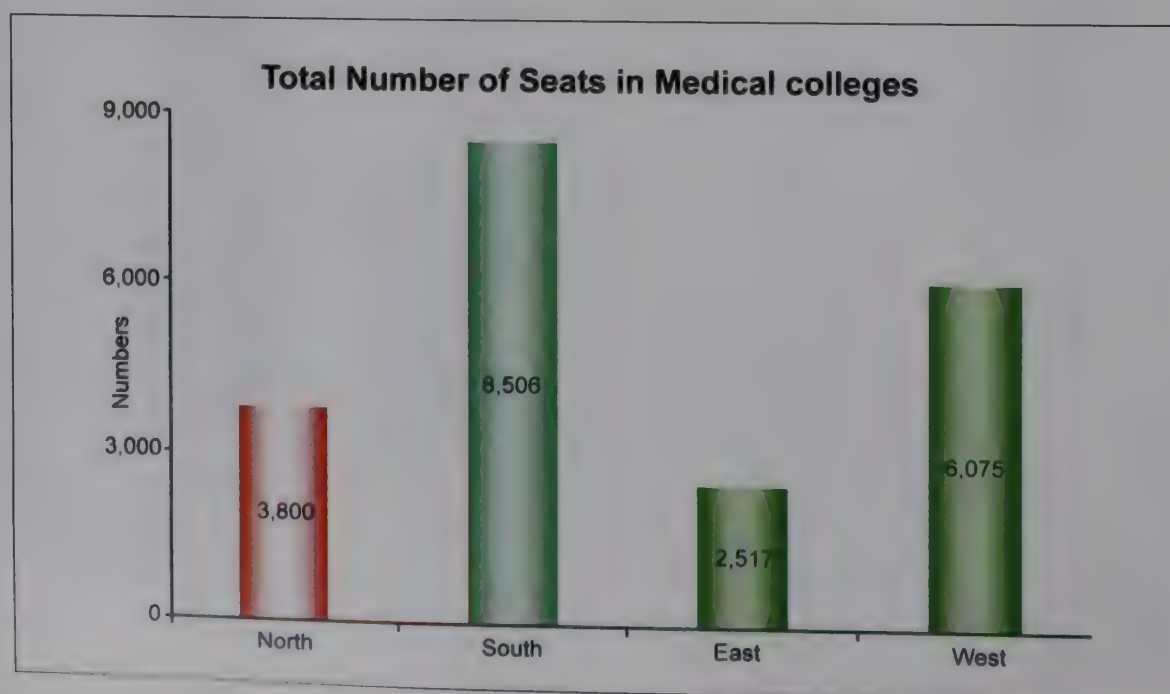

Source: AICTE, 2005-06.

## Total number of Management Institutes

Source: AICTE, 2005-06.

Total number of medical seats

2.5 Consumer Markets

Our fifth head, on size of consumer markets, should mirror the growth and prosperity indications. There are several items one can include in estimation of size of consumer markets, since a wealth of data is available on personal expenditure, sales of FMCG products and consumer durables. However, the inclusion of one variable often only replicates what other variables explain. Therefore, we only consider variables like the percentage of households owning television sets, the number of affluent households in urban and rural areas, per capita deposits in banks and per capita ownership of two-wheelers. The percentage of households owning television sets (2001) varies between 21.50% in Chhattisgarh and 74.54% in Delhi. The number of affluent households (1999-2000) is high throughout the North, except in Chhattisgarh, MP and UP. Per capita deposits in scheduled commercial banks (2003) vary between Rs 3,000.63 in Chhattisgarh and Rs 56,761.90 in Delhi. The number of two-wheelers per ten thousand population (2003) varies between 217.59 in Jammu & Kashmir and 4146.95 in Chandigarh. The aggregate index for consumer markets is shown in the map. The map reinforces the earlier picture of considerable pockets of wealth in the North, interspersed with considerable pockets of deprivation, with several regions wedged in between. Once variables are normalized, consumer markets as an indicator of wealth are worst in Chhattisgarh, with Rajasthan, MP, UP and Uttaranchal just above this.

Consumer Market
Index Value

■ 2.00 - 6.12
■ 1.50 - 2.00
▨ 0.70 - 1.50
  0.20 - 0.70
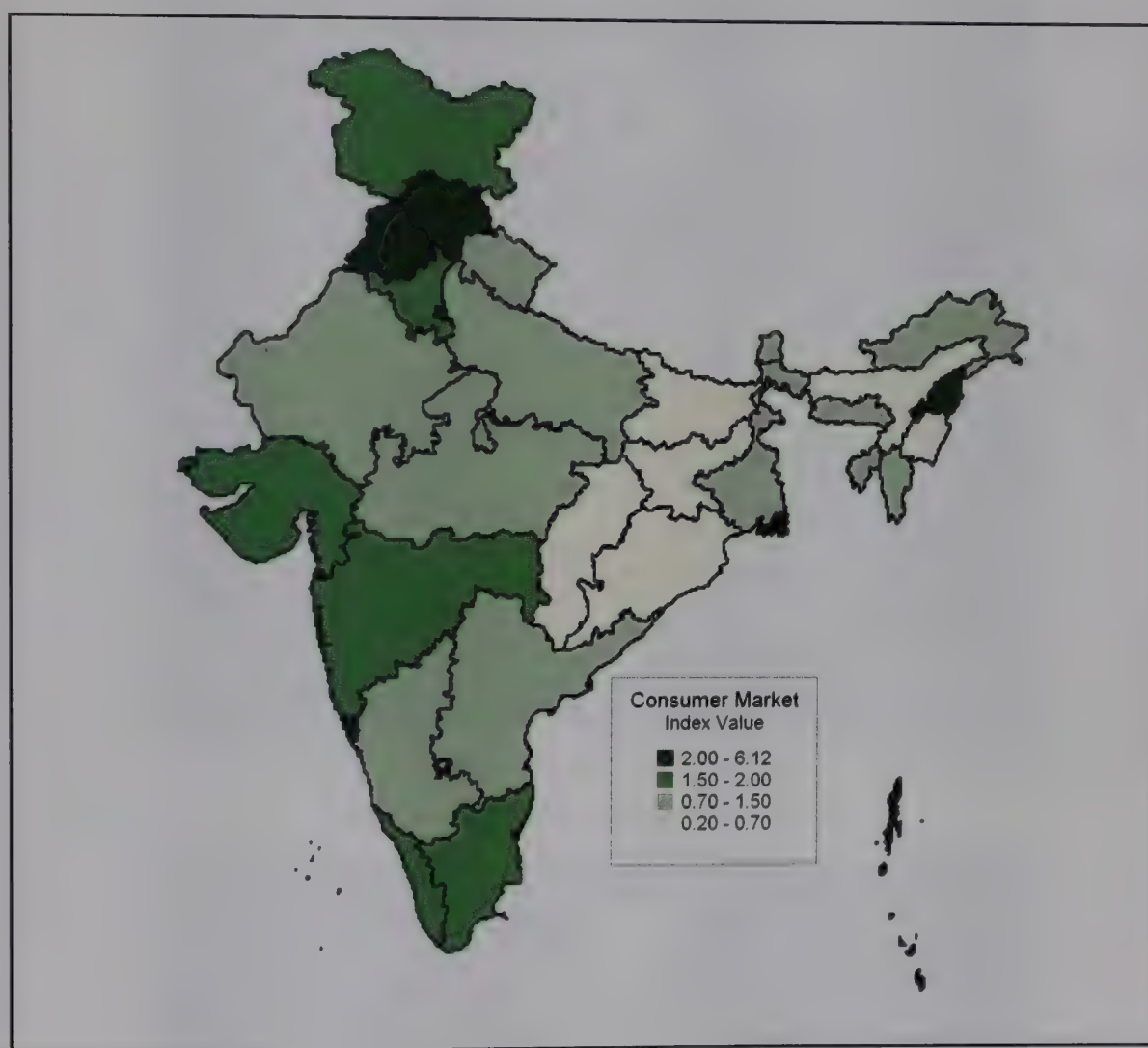
2.6 Agriculture

What explains this wealth and deprivation? Agriculture's share in GDP may have declined and the share of the services sector may have increased, but agriculture still accounts for a substantial share of the work-force. Indeed, if agriculture is interpreted in its commercialized and diversified form, rather than in the limited sense of food-grain output, the following three maps on export agri-zones for grains and flowers, fruits and vegetables show that there are very few regions in the North that do not have a comparative advantage in some variety of floriculture and horticulture.

Export agri-zones (grains and flowers)



Export agri-zones (fruits)

Eport agri-zones (vegetables)

If there is this comparative advantage, what explains why agricultural development hasn't progressed beyond the traditional Green Revolution areas of Punjab, Haryana and the western parts of UP? There can be several answers, but part of the answer is certainly related to the absence of rural infrastructure. For example, the map on *mandis* shows a great concentration in the traditional Green Revolution areas and an absence in remaining parts of the North.
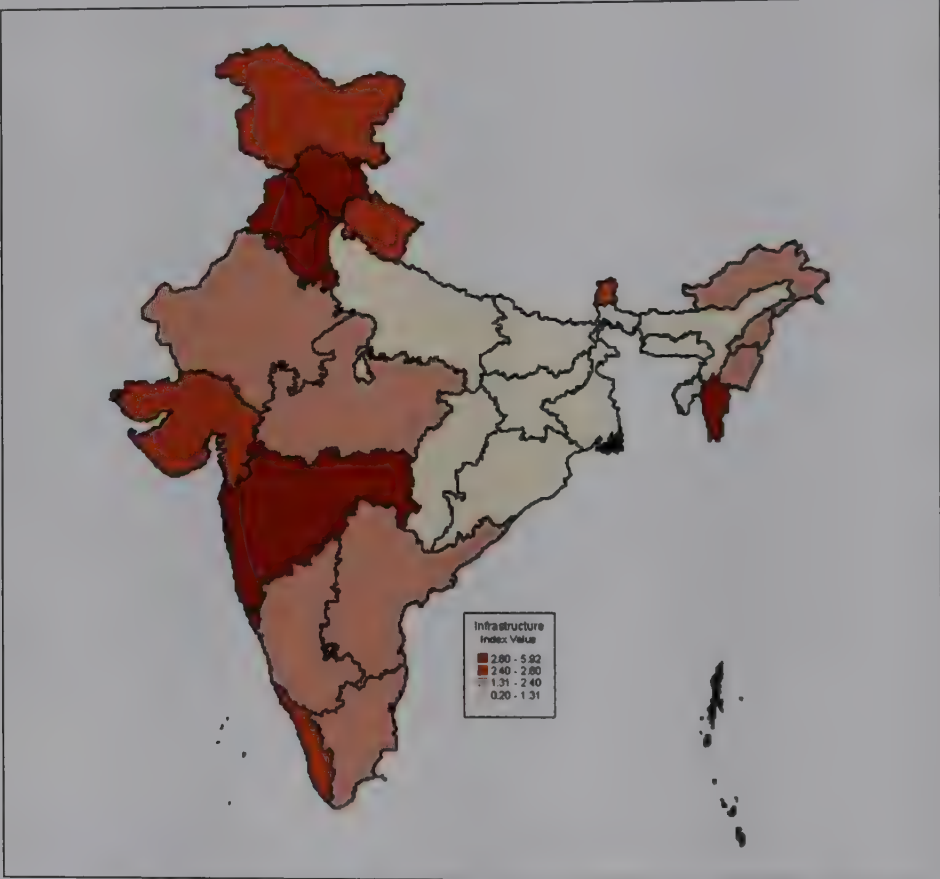

Mandis (Districtwise)

To return to the agricultural head, the variables included are the percentage of cultivated area under cash crops, agricultural contribution to State domestic product per rural population, agricultural electricity consumption per rural population, food-grain yield, loans extended to farmers and the percentage of area that is net irrigated. The percentage of area under cash crops (2001) has a low of 3.06% in Himachal and a high of 35.17% in MP. Per rural population, agricultural contribution to SDP is nowhere near as high as in Punjab and Haryana. This is also mirrored in agricultural electricity consumption. Food-grain yields (2002-03, kg/hectare) vary between 607.50 in Chhattisgarh and 3785.0 in Punjab. Only 21% of net sown area is irrigated (2000-01) in Chhattisgarh. Loans extended to agriculture, per household cultivating land in 2003, range between Rs 1,192.07 in Chhatttisgarh and 24,269.72 in Punjab. Admittedly, there are problems associated with topography and dry-land areas. But these figures are nevertheless, significant. The aggregated agriculture index, depicted visually in the map, reinforces these trends. Darker areas are the ones that are better performing. Ignoring Delhi and Chandigarh, the better performance in Punjab and Haryana is evident. Rajasthan and UP (especially the western parts) don't fare that badly. However, there are problems in Jammu & Kashmir, Himachal, Uttaranchal and MP, with a rather acute problem in Chhattisgarh. This is not to suggest that classic agriculture has to be an answer to the poverty problem. But with a significant percentage of the population employed in the rural sector, rural development is indeed an issue.

Agriculture
Index Value

■ 1.25 - 4.03
■ 0.70 - 1.25
□ 0.40 - 0.70
  -0.90 - 0.40
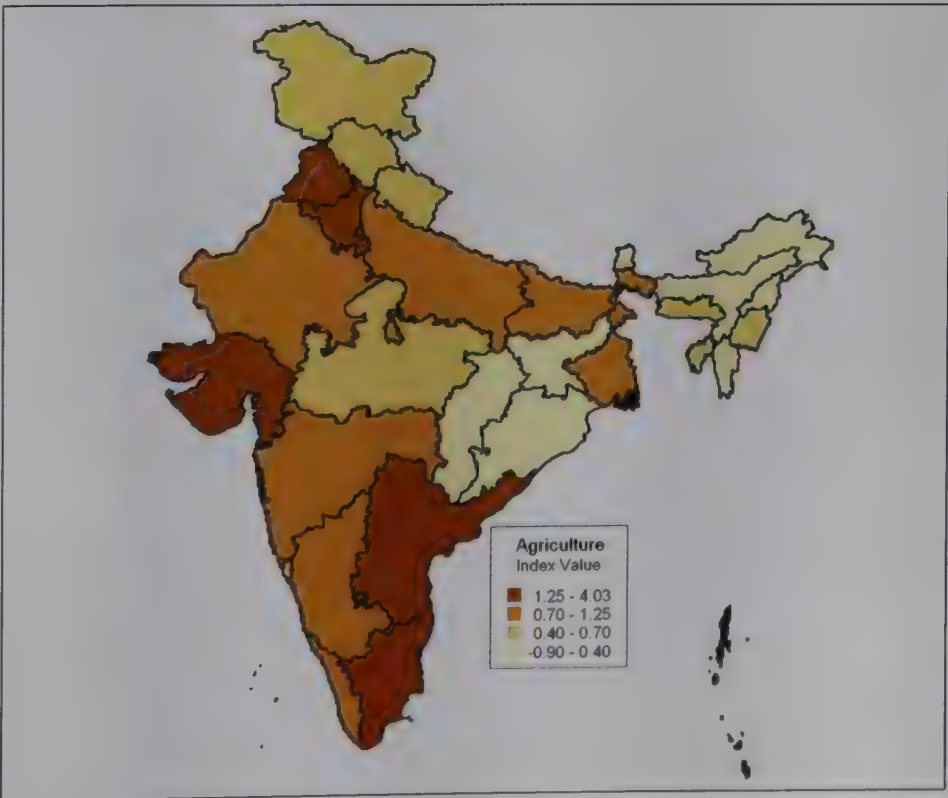
2.7 Infrastructure

Infrastructure not only facilitates rural development, but is also critical for industrial and service-sector growth, although perhaps less serious an issue for services, depending on how infrastructure is defined. Within physical infrastructure, our surrogate indicators are percentage of households with electricity, percentage of villages connected with *pucca* roads, per capita road length, bank branches, LPG connections, the number of post offices and the number of telephone connections, all suitably normalized. The percentage of households with electricity connections (2001) may be 96.77% in Chandigarh, but is only 31.90% in UP. Ignoring Delhi and Chandigarh, the percentage of villages with *pucca* roads (2001) varies between 15.48% in MP and 99.01% in Haryana. The distribution of bank branches, post offices and telephone connections also show similar disparities. And this shows up in the aggregate infrastructure index shown in the map. When normalized, infrastructure is a serious problem in Rajasthan and MP and an extremely serious problem in UP and Chhattisgarh. In one particular aspect of the infrastructure problem, namely, electricity, the backward areas show up very clearly in pictures of India taken at night. Having said this about infrastructure, one should note that there has been a significant improvement in telecom infrastructure, particularly of the mobile variety and pessimism about infrastructure is largely correlated with lack of progress on electricity. But transport infrastructure has begun to improve. For instance, the first two phases (the Golden Quadrilateral and the North-South and East-West corridors) will improve road connectivity significantly in the North and when spliced with Phases III and IV of NHDP (National Highway Development Programme) and feeder roads through the Pradhan Mantri Gram Sadak Yojana (PMGSY), there is some scope for optimism.

GOLDEN QUADRILATERAL :
DELHI - KOLKATA - CHENNAI - MUMBAI - DELHI : 5952 KMS

NORTH SOUTH EAST WEST CORRIDORS :
COMPLETED 4 LANED STRETCHES OF NHDP

Indeed, the Eleventh Finance Commission had an index of economic and social infrastructure across States, and it is worth reproducing this to illustrate the infrastructure disadvantage that the North (except Punjab and Haryana) suffers from. (The higher the value of the index, the better.)

Index of Economic and Social Infrastructure

State	Infrastructure index
Andhra Pradesh	99.19
Arunachal Pradesh	48.94
Assam	81.94
Bihar	92.04
Goa	192.29
Gujarat	123.01
Haryana	158.89
Himachal Pradesh	80.94
Jammu & Kashmir	76.07
Karnataka	101.20
Kerala	205.41
Madhya Pradesh	65.92
Maharashtra	121.70
Manipur	70.38
Meghalaya	73.75
Mizoram	61.85
Nagaland	70.92
Orissa	74.46
Punjab	219.19
Rajasthan	70.46
Sikkim	104.62
Tamil Nadu	149.86
Tripura	83.55
Uttar Pradesh	111.80
West Bengal	131.67
All India	100.00

Source : *Finance Commission Report for 1995-2000*, New Delhi, 1994.

2.8 Investment Climate

Having said this about infrastructure, we now move on to the investment climate. The investment climate category includes variables like per capita public capital expenditure, per capita gross capital formation in manufacturing, the number of industrial workers (in the urban 15-59 population), the percentage of sick SSI units, the number of factories and the number of industrial disputes. The development of industrial concentrations requires an adequate and skilled labour force, easy access to inputs, markets for produced goods, connectivity with the rest of the economy and other backward and forward linkages. In this connection, it is important to note that unlike the West or the South, very few industrial corridors have emerged in the North. The only major one that has emerged, or has the potential to emerge, is the one that spans the districts of Ludhiana, Jalandhar, Patiala, Rupnagar, Kapruthala, Amritsar, Bhatinda, Faridkot, Ferozpur, Gurdaspur, Hoshiarpur, Sangrur, Ambala, Faridabad, Karnal, Kurukshetra, Panipat, Rewari, Rohtak, Sirsa, Yamunanagar, Sonipat, Bhiwani, Hissar, Jaipur, Ajmer, Ghaziabad, Meerut, Dehradun, Haridwar, Solan, Sirmaur and Shimla. There is yet another, relatively minor one, between Kanpur and Lucknow. There is a lot of literature on spatial distribution of industrial clusters in India, and industrial corridors are a specific instance of clusters. Most clusters have an autonomous origin and are rarely induced, emerging around local skill or natural resource bases. But there are instances of product specific industrial estates subsequently emerging as clusters and of cluster emergence following the setting up of some kind of lead industry. The idea of cluster formation is not new in India. Since the Industrial Policy Resolution of 1948, successive Five-Year Plans and promotional schemes have promoted industrial clusters. The question to ask is, why aren't there sufficient industrial clusters in the North? What will it take to promote them? The answer no doubt has a lot to do with infrastructure, mentioned earlier. Moving beyond infrastructure, the map shows

the investment climate in the North as compared to the rest of India, based on the variables we have mentioned earlier, and aggregated into an index. Chhattisgarh is affected by the choice of variables and the normalization used. But the problems in the heart of the North, Rajasthan, MP and UP are evident. In passing, UP is a large and heterogeneous State. One can often form a mistaken impression about UP from what is happening in the western parts, especially those that are extremely close to Delhi.

Investment
Index Value

■ 2.10 - 4.18
■ 1.63 - 2.10
■ 1.10 - 1.63
   0.41 - 1.10
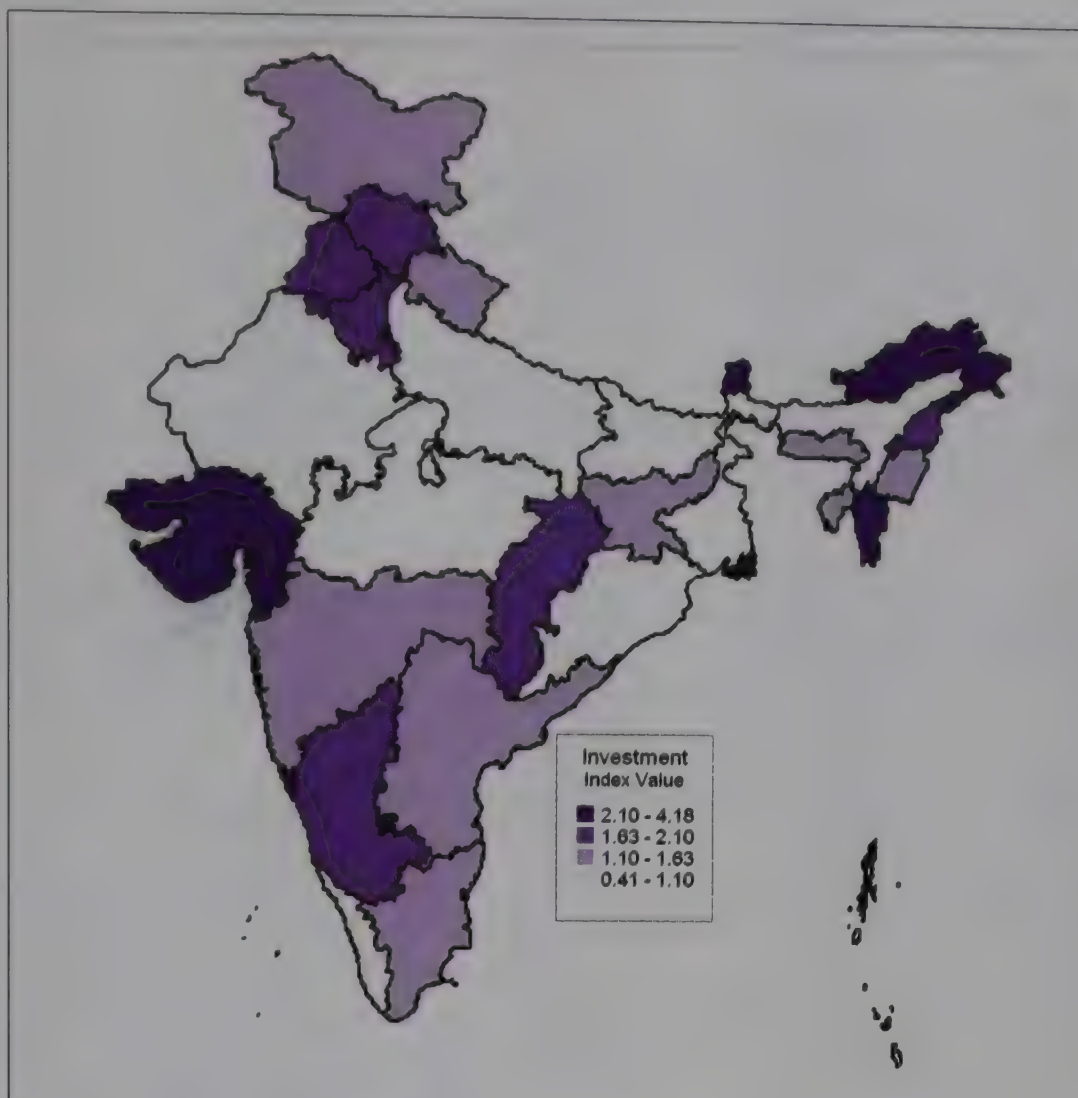
2.9 Performance of the North: Conclusion

Before we conclude this section, it is worth dramatizing matters to illustrate the relative non-performance of the North. Let us ask ourselves the following question. If the business-as-usual scenario continues, and present trends are extrapolated, what country in the world (today) will a State in the North be similar to, in the year 2020? The answer depends on the variables used. However, we offer an indicative answer based on the variables and indices we have already mentioned. And the answer is not very flattering. In 2020, UP, MP, Chhattisgarh and Jharkhand will be roughly where Pakistan is today. Jammu & Kashmir, Rajasthan and Uttaranchal in 2020 will be roughly where Egypt is today. Himachal, Punjab and Haryana in 2020 will be roughly where Brazil is today. And Delhi in Chandigarh in 2020 will be roughly where Germany is today. The German comparison may seem flattering, but in general, the North should be doing much better.

Chapter 3

Economic Growth in Northern States in the 2000's[5]

This chapter gives an overview of growth in the Northern States in the 2000s.

3.1 Economic Growth and Infrastructure

It is a well-known fact that India is on an accelerating growth phase. However, the major concerns are on the sustainability of growth rates. The concerns are due to the reasons that accelerating growth requires a strengthened infrastructure sector that appears to be slowing down. The only exception is railways, which have shown a satisfactory growth rate.

It is expected that infrastructure problems will get worse, especially in high growth States. That is because if States continue to grow at a faster rate, then adequate infrastructure will be required to sustain such high growth rates. It may also be said that failure on the infrastructure front will not only slow growth down in the long run, but also in the short and mid term.

Those States, which traditionally have better infrastructure, are improving more and States like UP and Chhattisgarh, that do not have better infrastructure are not doing well in terms of improving it further. Thus, due to lack of infrastructure facilities, these States are not performing well and continue to have lower growth rates. It can be said that growth is concentrated in those areas only that already have better infrastructure.

3.2 Analysis of Growth Rates of the Indian Economy in the 2000's

An analysis of the Indian economy during the 2000's gives an impression of an increasing trend in the growth rate.
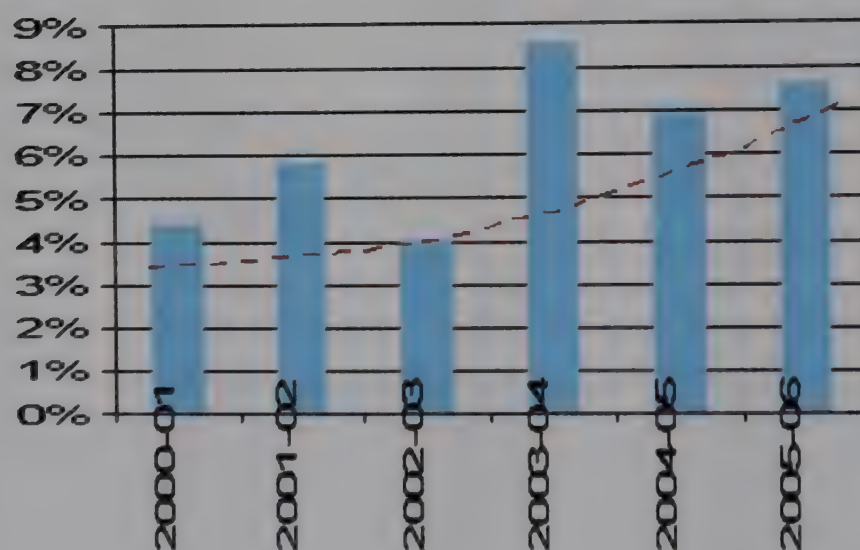
The reasons for such an accelerating growth can be attributed to:

- The country's dependence on monsoons has reduced.

- There is an increase in domestic savings that is expected to continue over a period of time. This is not only because the savings of the public sector are increasing, but savings from the household sector are also growing. It is projected that the savings rate is going to cross 30% in the next few years.

- There is an increase in foreign investment.

- Thanks to the demographic dividend, there is a greater labour input.

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[5] This chapter is based on work with Sumita Kale.

Efficiency, represented by the incremental capital/output ratio (ICOR) has declined, and the sectoral shift in GDP reinforces this.

3.3 Average Annual Growth Rate of Different States

| State	Av. Ann. Growth 2000-04
Chandigarh	9.20%
Rajasthan	6.70%
Delhi	6.70%
India	6.30%
Haryana	6.30%
Himachal Pradesh	6.00%
Madhya Pradesh	5.80%
Uttaranchal	5.40%
Uttar Pradesh	3.00%
Punjab	2.80%

The above table shows the average annual growth rate of Indian states from 2000-2004. The interesting fact which emerges is that locational advantage also plays an important role in the growth rate. Delhi being the national capital, its infrastructure is driving growth rates in the northern region of India. States, which are in close proximity to Delhi, are growing at a faster rate compared to the States that are further from Delhi.

3.4 Comparison of India's growth rate with growth rates of individual States

A comparison has been made between the growth rate of the Indian economy vis-à-vis the growth rates of States. The average growth rates of States are estimated by studying sectors like manufacturing, agriculture, construction and services. Twelve year historical data are used (1994-95 to 2005-06) for comparison purposes. Some of the States that are compared with India's overall growth are: Haryana, Punjab, Himachal Pradesh, Rajasthan, Uttar Pradesh, Delhi, Madhya Pradesh and Bihar.

The historical growth rates are shown in the form of charts. The **pink line** depicts India's growth rate and **blue line** depicts growth rates of individual States.

Haryana vs India
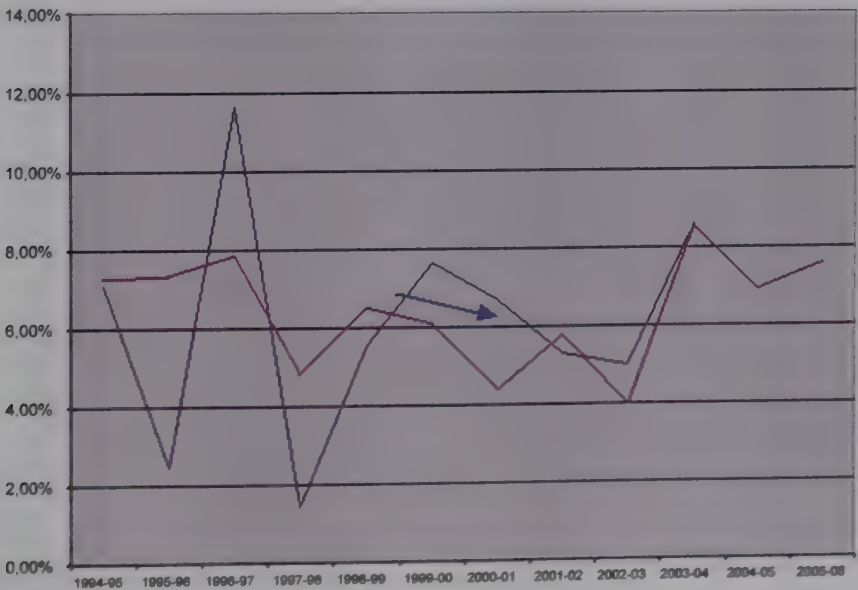
The growth rate of Haryana is coincident with the overall growth rate of India. In the 2000's the growth rate is stabilizing, which means that growth is less dependent on agriculture. Haryana has neither been leading India nor

following India. However, geographically the growth is lopsided, as most of the growth is taking place in the vicinity of Delhi. Growth across manufacturing, agriculture and the services sector is quite even.

Punjab vs India

Punjab has been lagging India for the last 10 years. Relative to India's growth, the growth rate of Punjab is lower and appears to be slowing down. There is a strong evidence of deceleration in both services and the manufacturing sector. Agricultural yields are also down. However, its infrastructure sector has improved, but the improvement is only for households and not for industry. The only sector that is growing in Punjab is manufacturing. The reasons for the slowdown of growth rates in Punjab are that the opportunities for growth that were available in the 80's were tapped in the 90's and new opportunities were not created.

Himachal Pradesh vs India
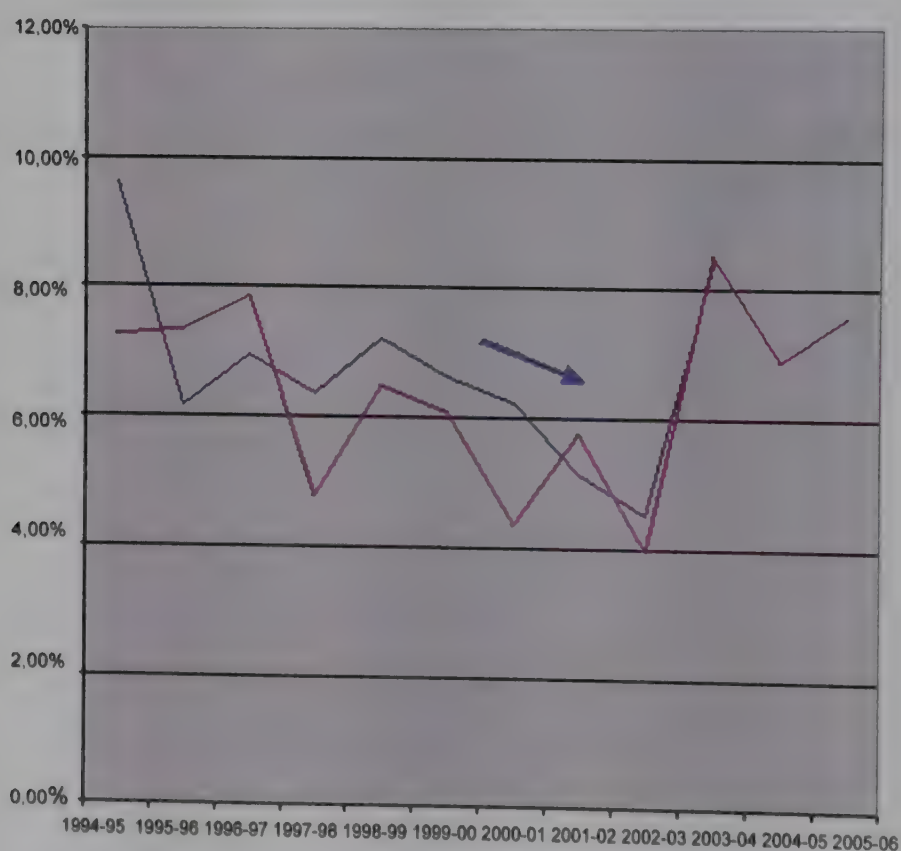
Himachal Pradesh is leading India in economic growth. Even in terms of socio-economic segments like education, higher education, health *etc*, HP is leading. It is expected that it will beat Kerala in the next 10 years on various socio economic parameters.

Rajasthan vs India
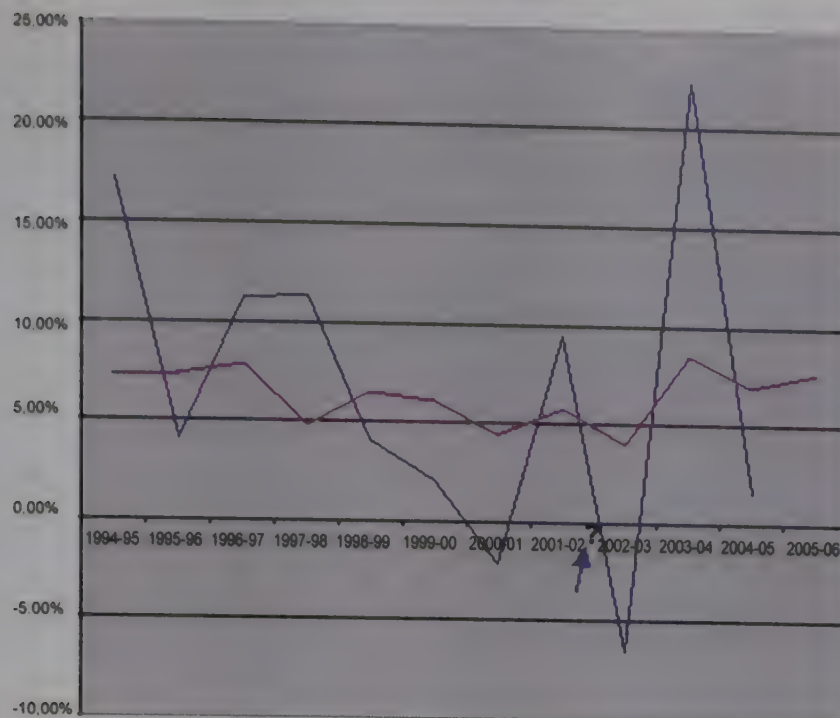
The growth rate of Rajasthan is highly volatile. The high volatility in growth rates is due to its dependence on agriculture. Its growth rate shoots up in a year of decent rainfall and slows down in a year in which there is low rainfall. Also, Rajasthan's economy is highly dependent on surplus generated by its agriculture and tertiary sectors. However, its manufacturing sector has become less dependent on agriculture and the State has also reduced its dependency on agricultural products in recent years.

Uttar Pradesh vs India
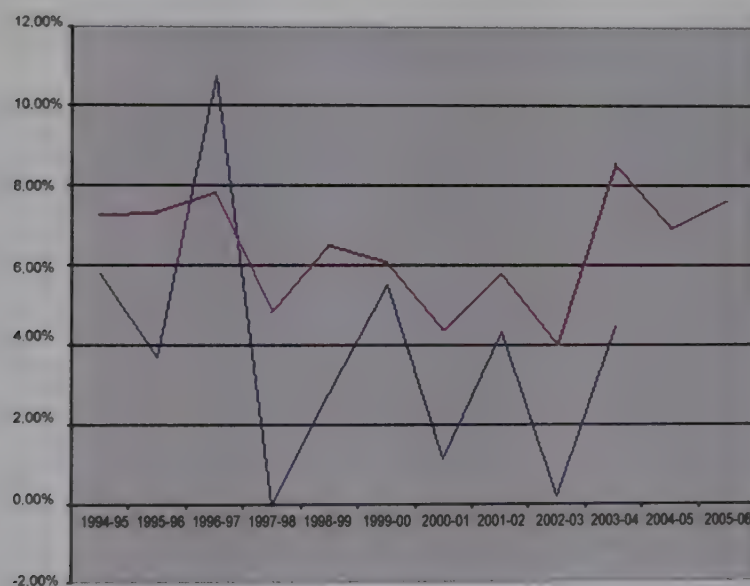
Uttar Pradesh has forever lagged India. If we look at the long-term trend of India's growth rate, we can see an increasing trend. But in case of UP, there is a decreasing long-term trend of growth rate. The reason for the decreasing trend is due to lack of contribution from agriculture and tertiary sectors. Its infrastructure sector is also not very well developed. However, manufacturing and construction sectors are doing well.

Delhi vs India
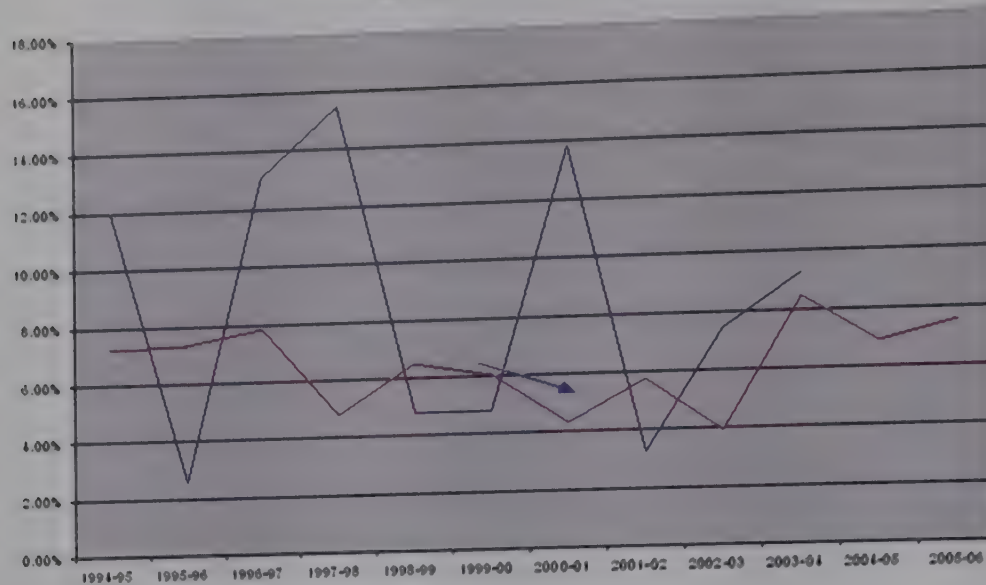
As we can see from the chart, the growth rate in the mid 90's was low in Delhi. This was because most of the manufacturing industries were ordered to close down their operations. However, Delhi is growing on the back of its services sector. A separate study by the authors has projected the growth rate of Delhi at 15%. However, infrastructure and power problems are going to increase in the near future. This is because investments in power and infrastructure have not been made as per the requirements. If India has to grow at 8%, then Delhi has to grow at a rate of around 10% to 12%. Thus, at such high growth rates, infrastructure and power demands are likely to be even higher. Moreover, large city economies are even more dependent on energy and infrastructure.

Madhya Pradesh vs India
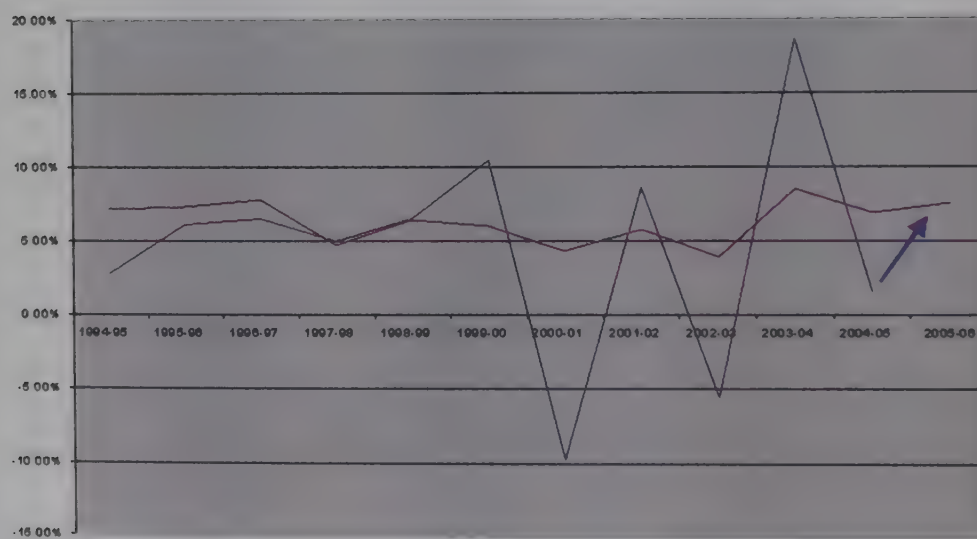
The growth rate of Madhya Pradesh is highly volatile. There has been a serious deceleration in the manufacturing sector. There is also higher volatility in agriculture production and one reason for such volatility may be high level of deforestation. However, after its disassociation with Chhatisgarh, its dependency on agriculture has reduced. MP is doing well in the construction and tertiary sectors.

Bihar vs India
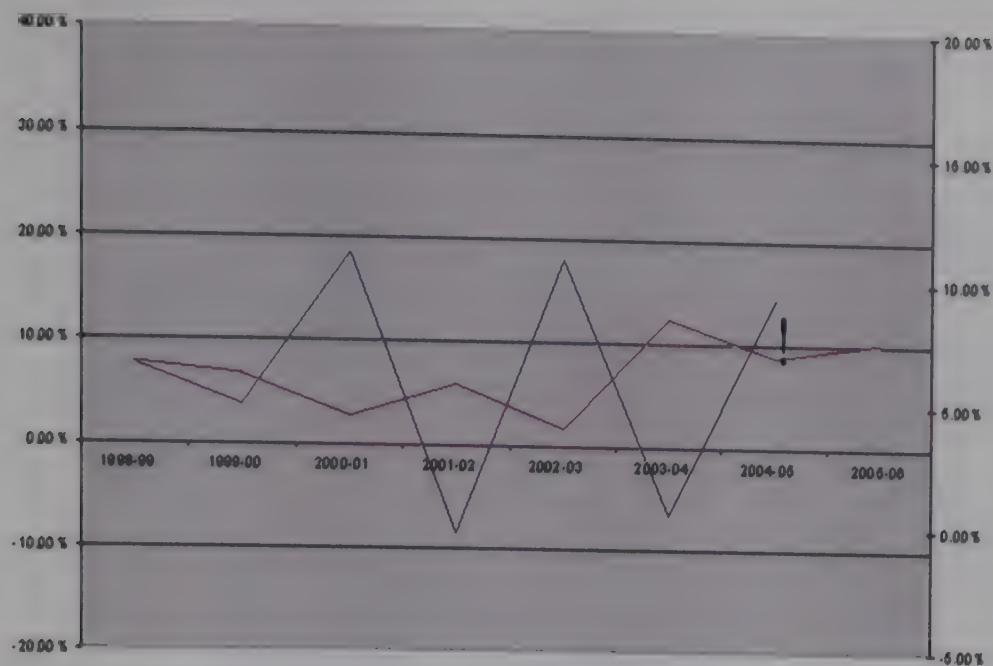
The above chart shows a very interesting relationship between Bihar's growth rate and India's growth rate. There appears to be a negative correlation between Bihar's growth rate and India's growth rate. Whenever India does well, Bihar does badly and vice-versa. The reason for such an inverse relationship is that India does well when there are good rains, whereas Bihar does badly when rains are good and there are floods.

3.5 Projections of State GSDP and Living Standards

A comparison of the States and other countries of the world have been carried out based on predictions of purchasing power parity. These predictions are computed on the basis of compounded annual growth rate of these States. If India grows at 8% till 2020, then in terms of purchasing power parity, Indian States can be linked with other countries of the world. That is, in 2020 Bihar will be as Bangladesh is today, UP will be as Zimbabwe is today.

State	PC GSDP (PPP) in 2020	Like this country today
Bihar	1,696	Bangladesh
Uttar Pradesh	2,748	Zimbabwe
Madhya Pradesh	2,862	Azerbaijan
Chhattisgarh	2,926	Indonesia
Uttaranchal	5,739	Algeria
Rajasthan	6,044	Colombia
Himachal Pradesh	9,528	Chile
Panjab	10,198	Mauritius
Haryana	10,290	Estonia
Delhi	26,684	Australia/Japan
Chandigarh	36,901	United States
All-India	**7,587**	**Brazil**

But if we look at some of the high growing States/ UTs like Delhi and Chandigarh, we can see from the above table that these States will be no less than developed countries like US and Japan in 2020.

3.6 Economic Growth and Environment

Growth rates in most of the States are driven by agriculture and it will continue to contribute to economic growth in the future as well. For agriculture, rainfall is very important. Not only agriculture, industry also depends on rainfall. There has been strong evidence that yields in Punjab, Haryana, Western UP, Western MP and Maharashtra have stagnated due to non-availability of sub surface water[6]. Thus, water is a major problem and this problem is closely linked with the environment. It is believed that the environment will be the biggest concern for the Indian economy in the next 10 years and to overcome this problem, adequate importance should be given to the environment in the budget.

Chapter 4

Intra-State Variations[7]

4.1 Introduction

There are considerable variations within States, such as the differences between the western and eastern parts of UP. These regional issues are often not analyzed because there is a data problem. Data are easier to obtain at the State level. There are 78 regions in the country, as per the NSS (National Sample Survey) classification. But data are difficult to obtain on social sector or governance indicators at this regional level. However, it is possible to obtain some data at a relatively fine geographical level. When used in conjunction with more macro data, this allows us to decipher what is happening within the States.

4.2 Regions

Data on economic growth, captured for example, by indicators like sales of motor spirit and diesel, commercial bank credit and deposits or food-grain production are available. On the basis of such economic growth related variables, the first part of this chapter tells us what is happening to regional economic growth in India, after the 1991 reforms. More specifically, the question that is asked is the following. Has a region's share in India's overall economy, measured by such growth variables aggregated into an index, increased or decreased in the post-1991 period? Constrained by choice of variables, this provides some answer as to what has been happening at the intra-State level. The time-frame is the 1990s, beginning with 1991-92. The broad regional picture is shown in the map that follows. Blue shades indicate regions that have increased their economic share over time, the darker the shade of blue, the better. Red shades indicate regions that have declining economic shares over time, the darker the shade of red, the worse off the region is. This is, in that sense, a relative rather than an absolute map. Despite the low bases, there have been improvements in Rajasthan and parts of MP also. The problem area is primarily the eastern part of UP. Also, Punjab, Haryana and Rajasthan exhibit a reasonably even development across the regions.

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[6] "Scenarios for Meeting the MDGs in the WSS sector in India" (submitted to WSP - The World Bank)- Indicus Analytics, 2005.
[7] Based on "The Geography of Post 1991 India Economy" with Aarti Khare, Indicus Analytics, 2002.
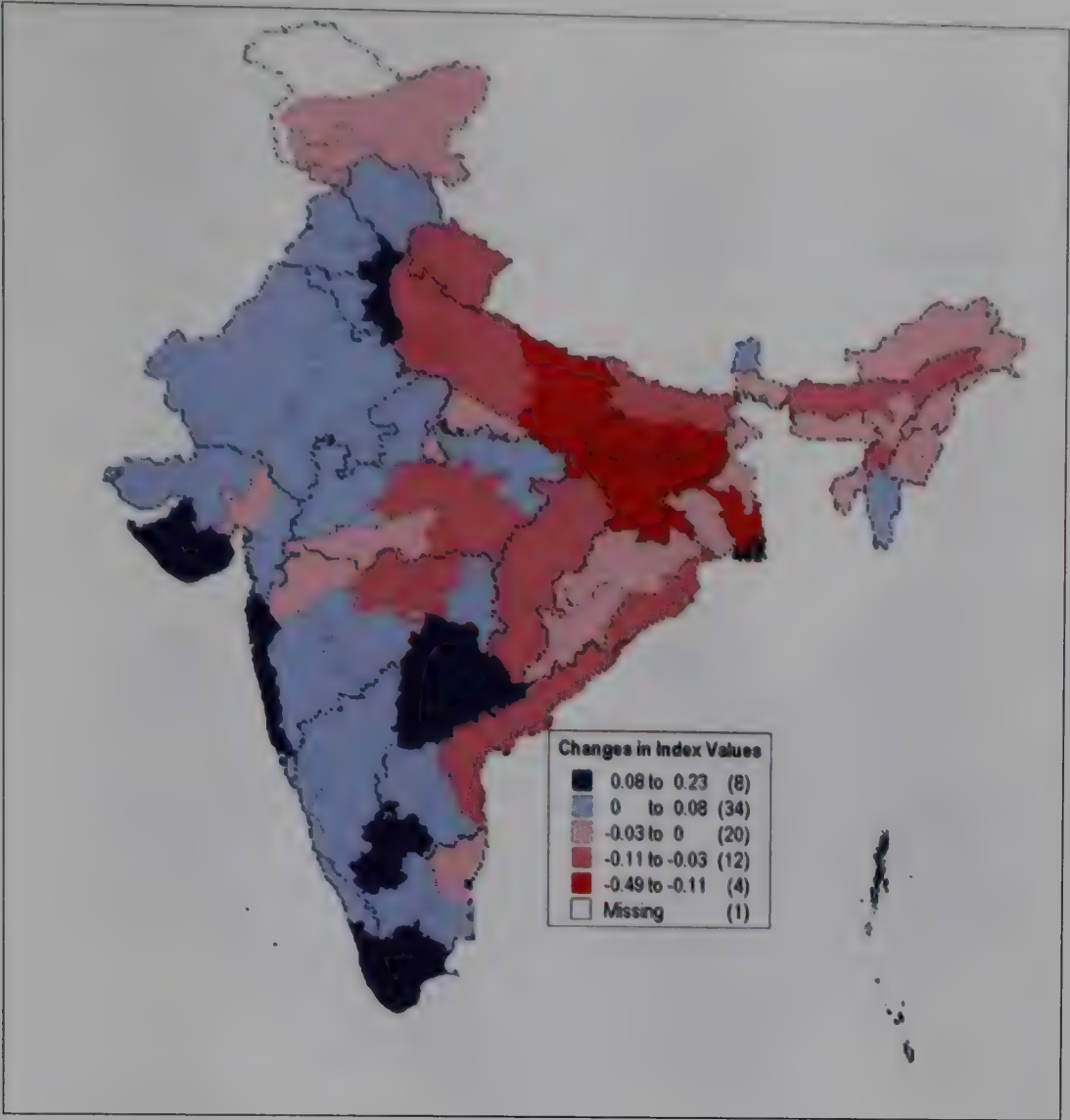
A more detailed scrutiny of the major States in the North is even more illuminating.

Haryana

Haryana is divided into two regions, the eastern and the western region. The eastern region, that is closer to Delhi, has improved its position. This region consists of the districts of Ambala, Faridabad, Gurgaon, Jhajjar, Kaithal, Karnal, Kurukshetra, Panchkula, Panipat, Rohtak, Sonipat and Yamunanagar.   In general, post-1991, Haryana has improved its economic share.
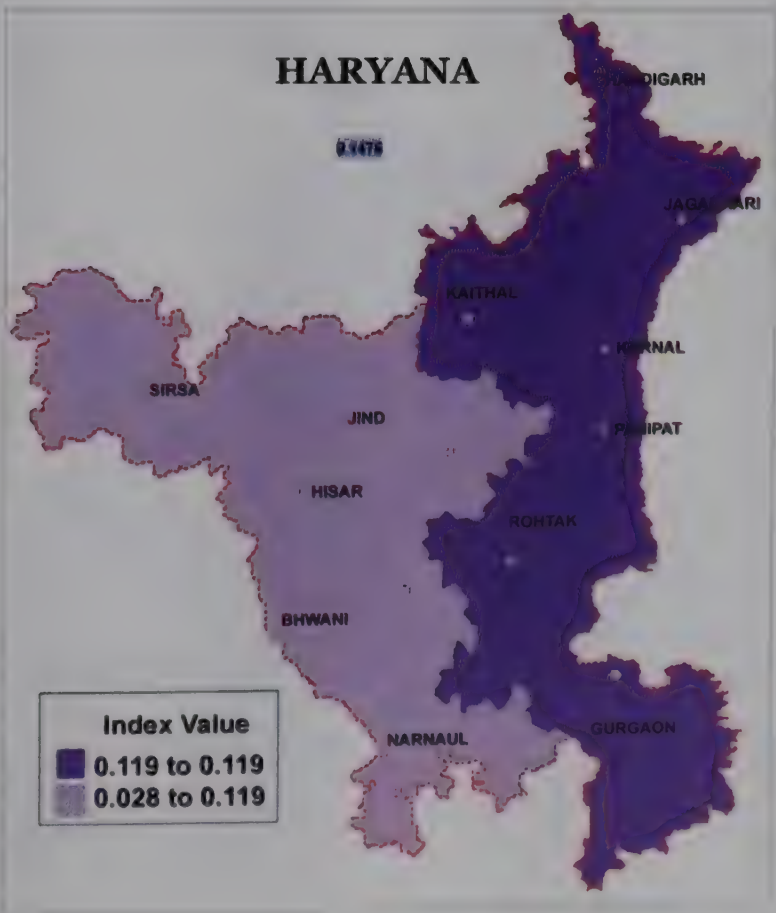
Madhya Pradesh

In general, MP has shown a downward movement in its position relative to other States. Out of the seven regions of the old undivided State of MP, only three managed to improve their position over time. Malwa region has improved the most, next is Northern MP, followed by the Vindhya region. The region whose share in the economy has reduced the most is Chhattisgarh. Next is South MP, followed by central and south western MP.
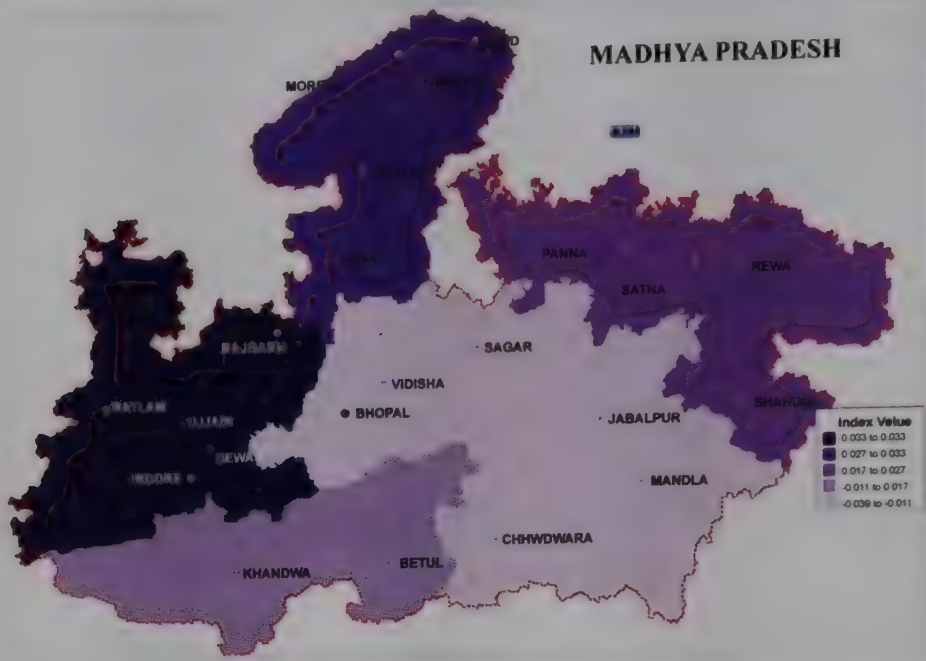
Punjab

Punjab prospered under the Green Revolution and has gained a lot from the reforms introduced in the 1990s as well. The position of the State has improved on the whole. Punjab is divided into the northern (Doab) and the southern regions (Malwa). The northern region, which contains districts such as Jalandar, Amritsar and Ludhiana, has shown better progress than the southern region. The northern region's relative position has improved more than that of the southern region.

Rajasthan

There are four regions in the large State of Rajasthan - one of the traditional BIMARU States. Rajasthan has shown some improvement in the post-reform period. Its relative position has improved as a whole and every region within Rajasthan has also increased its share of the economy. This is true especially of the regions that are closest to the State of Gujarat, namely the southern (Mewar) and the western regions (Marwar). The growth of Marwar has also been aided by the impressive growth on the agricultural front in the northern part, due to the increasing impact of the Rajasthan canal.
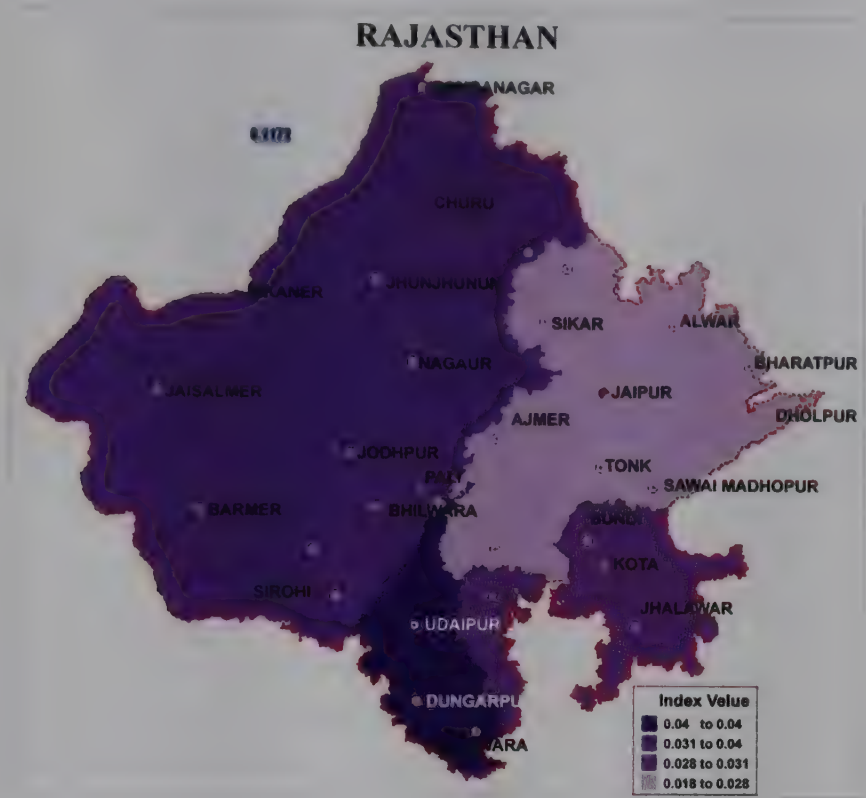
Uttar Pradesh

Like Rajasthan, UP is also a traditional BIMARU State. And in the context of the discussion in this section, UP is also the State that is the most worrisome. Compared to other States, UP has suffered a further decline in relative shares in the post-reform period. There are five regions in the undivided State of UP, including Uttaranchal and all five regions have moved downwards in economic shares. Within these overall declines, eastern UP has declined the most and southern UP has declined the least.

What is of concern is of course absolute improvements rather than relative ones. But within the relative framework, the concern areas are thus Uttaranchal, Chhattisgarh, Jammu & Kashmir, some parts of MP and UP, especially the eastern parts.

4.3 Districts[8]

Finally, in this section on intra-State differences, we focus on districts. According to Census 2001, there are 593 districts in India, although the Census was not carried out in Kutchh district of Gujarat. How does one decide whether a district is backward? What criteria should one use? Poverty ratios provide an obvious indicator and indeed poverty ratios have earlier been used by the Planning Commission to identify backward districts. However, it is possible to go beyond poverty ratios and the identification in this exercise is pegged to the Millennium Development Goals (MDGs). This makes it more broad-based than earlier attempts.

Since data on districts aren't always available, data are used on six indicators - income poverty (poverty ratios), hunger, infant mortality rate, immunization, literacy rate and enrollment ratios. In addition, gender disparity is highlighted through female and male literacy rates, but not actually used in the process of identifying backwardness. Data used are estimates for 2001. Poverty ratios show backward districts not only in undivided BIMARU States, but also in Gujarat, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Orissa, West Bengal and the North-East. Hunger (defined in National Sample Survey terms) exhibits a similar spatial distribution, but is less universal than poverty and is also more concentrated towards the East and the North-East. Other than a few neighboring districts of Karnataka and Andhra Pradesh and the North-East, the infant mortality rate identifies undivided BIMARU and Orissa. Lack of immunization is geographically a more serious problem, with a clear North versus South divide. Low literacy rates are spread throughout the country and expectedly, this is also mirrored in gross enrollment rates. While there is some correlation, it is not surprising that identification of backward districts depends on which of the six indicators are used. For example, under the poverty ratio criterion, India's worst districts are located in Bihar, UP, Jharkand, Orissa, MP, Assam, Maharashtra, West Bengal and Chhattisgarh, with a few districts from Arunachal, Karnataka and Tamil Nadu thrown in. Hunger has a broader geographical spread, with hungry districts also existing in Andhra, Goa, Haryana, Kerala, Manipur, Nagaland, Pondicherry, Rajasthan, Tripura and Uttaranchal. The contrast in spreads between the poverty criterion and the hunger criterion, with the former more concentrated, is a finding that needs emphasis. Moving on to infant mortality, the worst districts are in UP, Orissa, MP, Chattisgarh and Rajasthan. The worst off districts under immunization have a broader spread, with Bihar, Jharkhand, Arunachal, Karnataka, Assam, Gujarat, West Bengal and the North-East also included. A somewhat surprising finding is the fact that none of Bihar's districts figure in the worst off list under infant morality, but several are included under immunization. Conversely, Orissa has an extremely good record in immunization, but a poor record in infant mortality. Backwardness under the literacy criterion is concentrated in Orissa, undivided BIMARU, Arunachal, Karnataka, Andhra, Assam, Gujarat, Himachal, J&K, Punjab, West Bengal and the North-East. The enrolment criterion broadly mirrors this, with a large concentration in Bihar and UP. Perhaps one should mention that several of Gujarat's districts are backward under the enrolment criterion. For each indicator, the identification therefore throws up a set of districts. Is it possible to identify backward districts across the six indicators? The arbitrary cut-off that a district is backward if it classifies as backward in at least 4 out of the 6 indicators is used. This throws up a list of 69 backward districts – 26 in Bihar, 13 in UP, 10 in Jharkhand, 10 in Orissa, 6 in MP, 3 in Arunachal and 1 in Karnataka. These are India's most disadvantaged districts. But one should mention that these 69 districts are the most backward. Geographically, they are contiguous to another 70-odd districts that are also fairly backward. What is disturbing about this list of 69 is that 19 of them are in the North, 13 in UP and 6 in MP. This shows up in the map, with darker shades denoting better-off districts and lighter shades worse-off ones. While the 69 in the North are in UP and MP, the moment one includes the other 70-odd districts, one notices that several of them are in the North and the relative deprivation of the North vis-à-vis say the South, is obvious.
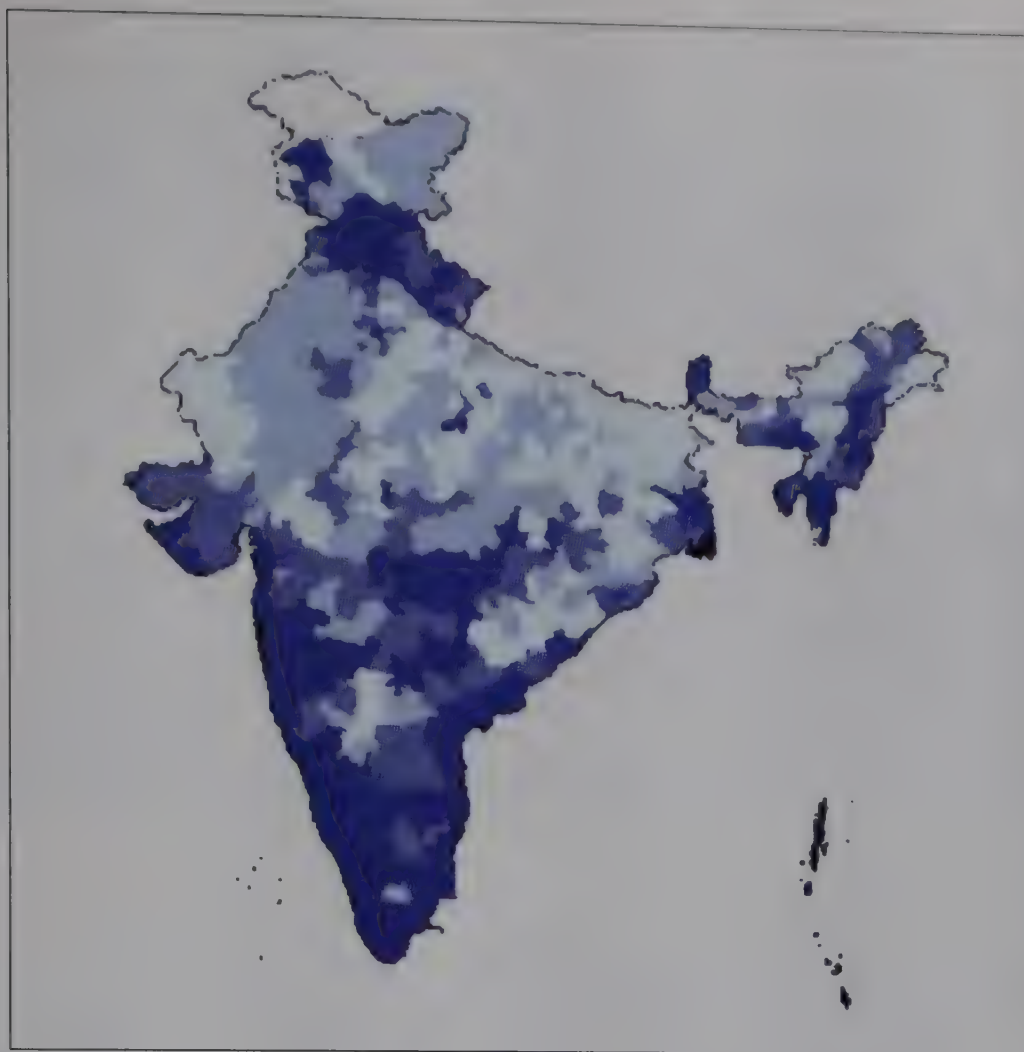
The 6 backward districts in MP are Chhatarpur, Damoh, Dhar, Jhabua, Panna and Tikamgarh, while the 13 in UP are Barabanki, Basti, Bijnor, Budaon, Fatehpur, Jyotiba Phule Nagar, Maharajganj, Moradabad, Pilibhit, Rae Bareli, Sant Kabir Nagar, Sitapur and Unnao. But as was said earlier, this is from the list of 69 worst-off districts and if one enlarges the base, there is a list of around 140 districts in India that are extremely backward. The National Food for Work Programme had a list of 150 backward districts, while the Rashtriya Sama Vikas Yojana had a list of 167. More recently, under the National Rural Employment Guarantee Act, 200 backward districts have been identified. In this identification, within the North, we have 11 from Chhattisgarh (Bastar, Bilaspur, Dantewada, Dhamtari, Jashpur, Kanker, Kawardha, Koriya, Raigarh, Rajnandagon, Surguja), 2 from Haryana (Mahendragarh, Sirsa), 2 from Himachal (Chamba, Sirmaur), 3 from Jammu & Kashmir (Doda, Kupwara, Poonch), 18 from MP (Balaghat, Barwani, Betul, Chhatarpur, Dhar, Dindori, East Nimar, Jhabua, Khargone, Mandla, Satna, Seoni, Shahdol, Sheopur, Shivpuri, Sidhi, Tikamgarh, Umaria), 1 from Punjab (Hoshiarpur), 6 from Rajasthan (Banswara, Dungarpur, Jhalawar, Karauli, Sirohi, Udaipur), 22 from UP (Azamgarh, Banda, Barabanki, Chandauli, Chitrakoot, Fatehpur, Gorakhpur, Hamirpur, Hardoi, Jalaun, Jaunpur, Kaushambi, Kheri, Kushi Nagar, Lalitpur, Mahoba, Mirzapur, Pratapgarh, Rae Bareli, Sitapur, Sonabhadra, Unnao) and 3 from Uttaranchal (Chamoli, Champawat, Tehri Garhwal).

This socio-economic disparity becomes a serious policy issue. The Institute for Conflict Management has a map of conflict in South Asia, through its South Asia Terrorism Portal. This map is reproduced below and shows an obvious correlation between deprived districts and intensity of terrorism or violence, at least at the all-India level. Apart from Jammu and Kashmir, which belongs to a special category, this correlation is obvious for the central parts of India, extending eastwards. At first blush, one might tend to think that this is less of a problem for the North.
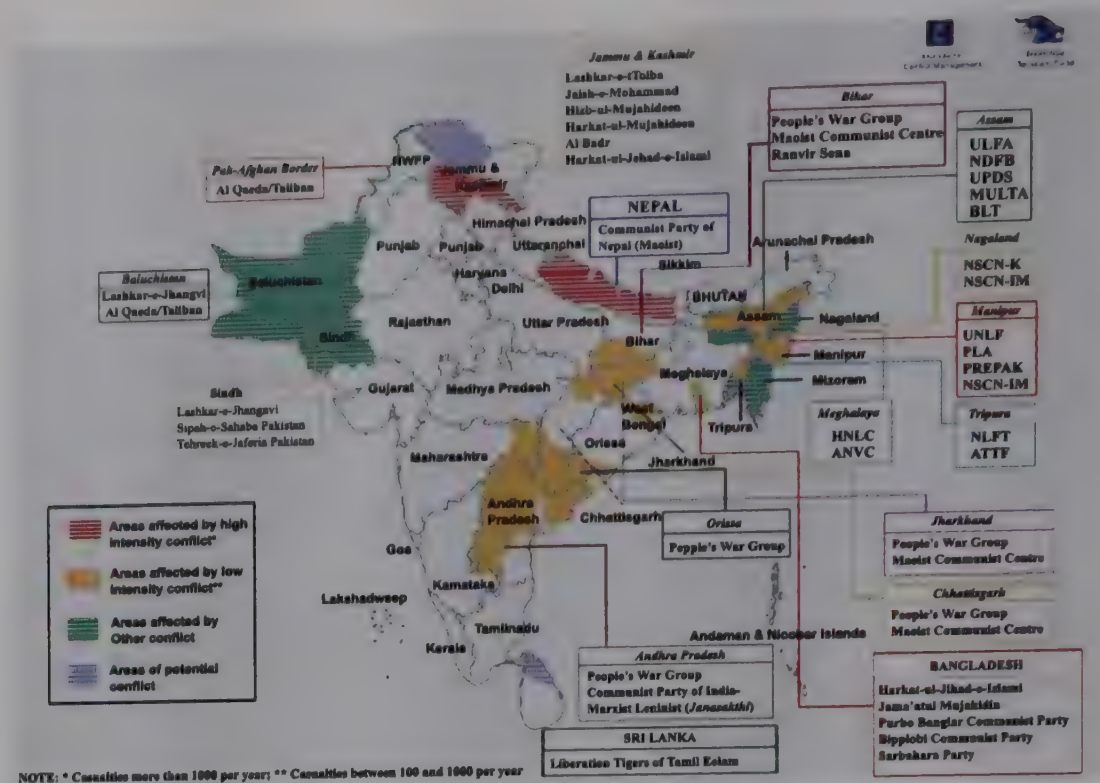
But there are at least four reasons why this complacency is unwarranted. First, there are regions within the PHDCCI definition of the North, even if one excludes Jammu and Kashmir, where there is a problem. Chattisgarh and Uttar Pradesh are examples. Second, as outlined above, there are districts or regions within the North where there is a deprivation cum marginalization problem. Third, this deprivation spills over into individual discontent, even if it doesn't yet assume the collective discontent form associated with terrorism. Fourth, again as outlined above, there is a serious law and order cum governance problem in much of the North.

Chapter 5

The Government's Role[9]

There is considerable debate in India about the need for reforms. It is unnecessary to enter into this debate. Whichever way one looks at this debate, the debate is essentially about the role of the government or the State. Indeed, definitions of governance are contingent on what role one assumes for the government or the State. Core governance areas are preservation of property rights, law and order, ensuring an efficient means of dispute resolution, providing an enabling framework for growth and some investments in physical and social infrastructure. These are areas where arguments for market failure, or even provisioning of public goods or merit goods, can be made. However, in India, governments are often required to perform other tasks, where the case for public sector provisioning is non-existent. In the process, the government fails to deliver satisfactorily on core governance areas. Many notions and measurement of economic freedom hinge on this minimalist role for the government, with private agents free to engage in commercial decisions.

As before, our intention is to use objective data, as opposed to subjective responses to questionnaires. This narrows down the number of variables one can use. It also narrows down the number of States that can be used for the ranking and we are constrained to do the ranking only for 20 major States. These States are ranked under three broad heads – (i) size of government; (ii) legal structure and security of property rights; and (iii) regulation of credit, labour and business. And in undertaking this ranking, the choice of variables is dictated by the Constitutional provisions on what are State subjects.

On the first, size of government, economic freedom exists when the government plays the role only of providing protection to the citizens from physical harm and protects property rights. Interference of the government in the functioning of the economy or the role of the government as a producer and provider of services and goods, or of redistribution of resources, reduces the level of economic freedom. Government revenue expenditure, administrative GDP, and a large employment in the public sector are therefore indicators of size of the government. Power subsidy to domestic consumers, taxes on income, commodities and services, property and capital transactions, and other duties are indicative of the extensive role played by the government in the economy. Recently there has been a move towards privatization of the public sector in India. This has also been captured in this category. More specifically, the nine variables included under this head of size of government are government revenue expenditure as share of gross State domestic product (GDSP), administrative GSDP as a share of total GSDP, per capita subsidy on power for domestic consumers, the share of the government in total organized sector employment, State taxes on income as a ratio of GSDP, the ratio of taxes on property and capital transactions as a share of GSDP, taxes on commodities and services as a ratio of GSDP, the stamp duty rate and the disinvestment rate of State-level public enterprises. These nine variables are aggregated to obtain an aggregate size of the government index, with the necessary normalization being done to make disparate States comparable.

On the second, the legal structure and security of property rights, the efficiency of the government in protecting human life and property is measured by this category. Quality of the legal infrastructure is measured by the availability of judges and by the completion rate of cases by courts and the police. The level of safety in the region is measured by the recovery rate of stolen property, and by rate of violent and economic crimes. The six variables included in this category are the ratio of total value of property recovered to the total value of property stolen, violent crimes (murder, attempt to murder, culpable homicide not amounting to murder, rape, kidnapping and abduction, robbery, riots, arson and dowry deaths) as a share of total crimes, cases under economic offences as a share of total cases, vacant posts in the judiciary as a ratio of total posts sanctioned, the percentage of cases where investigations were completed by the police and the percentage of cases where trials were completed by the courts. These six variables are aggregated to obtain a legal structure index. It may not be inappropriate to mention that as of 1 December 2004, in district and subordinate courts, 22.4% of posts were vacant in Chattisgarh, 34.1% in Haryana, 6.5% in Himachal Pradesh (January 2003), 8.6% in Jammu and Kashmir, 9.9% in Madhya Pradesh, 21.5% in Punjab, 25.6% in Rajasthan, 53.4% in UP and 18.1% in Delhi. On 2nd March 2005, the pendency in subordinate courts in UP was 3.88 million. Of the 29 fast track courts in Punjab, only 17 are functional.

On the third, regulation of credit, labour and business, an entrepreneur needs to take many decisions that cannot cater to the sentiments of all the workers and management that the firm employs. Decisions such as retrenchments etc. at the time of a slump are an essential part of maximizing profits. Constraints on exiting seriously hamper an entrepreneur's freedom. Labour laws for many decades have unduly favored the 'rights' of the workers in the country. The number of strikes and industrial disputes that take place in the economy portray the amount of economic freedom in terms of the control that an entrepreneur has over the business. Other areas where an entrepreneur may lack control over the business is in terms of unavailability of adequate infrastructure and raw materials. Such limitations severely constrain the entrepreneur's ability to enforce decisions that may be beneficial for business. High transaction costs are well known deterrents of trade and economic activity. They also contribute to 'black' market transactions. Higher the costs, in terms of licenses, the more constraints they impose on carrying out trade and economic activity and therefore serve as restraints on economic freedom of agents. Corruption also translates into higher transactions costs. The eleven variables included under this head are the ratio of average wages of male unskilled workers to minimum wages, the ratio of average wages of female unskilled workers to minimum wages, man-days lost in strikes and lockouts, the unorganized labour force in manufacturing as a share of the organized labour force, the number of special economic zones (SEZs), minimum licence fees for traders, market fees charged by government run or regulated market boards, the implementation rate of Industrial Entrepreneurs' Memorandums, power shortages as a percentage of total demand,
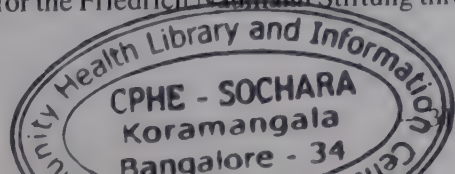
persons arrested under Prevention of Corruption and related acts and pendency of cases registered under such acts. As surrogates, or otherwise, all these variables capture the degree of entrepreneurial freedom. These variables are then aggregated to obtain an overall regulation index.

The three indices are then weighted and aggregated to obtain a composite index and the diagram below indicates the picture that emerges.

It is obvious that, in terms of economic freedom, the North doesn't perform as well as the rest of India. In general, economic freedom is far greater in the West or the South and it is small consolation that the North tends to perform better than the East. As the scores show, the gap between Tamil Nadu and Uttaranchal is considerable. The map shows that the problem is particularly serious in Punjab and Uttaranchal. The succeeding three maps depict how the North performs on those three separate heads of size of government, legal structure and regulation.

The Composite Economic Freedom Index for India-Ranks

State	Rank
Tamil Nadu	1
Gujarat	2
Kerala	3
Andhra Pradesh	4
Madhya Pradesh	5
Haryana	6
Jharkhand	7
Uttar Pradesh	8
Karnataka	9
Maharashtra	10
West Bengal	11
Rajasthan	12
Himachal Pradesh	13
Jammu & Kashmir	14
Orissa	15
Punjab	16
Chhattisgarh	17
Bihar	18
Uttaranchal	19
Assam	20

Composite Ranks and Economic Freedom Index

State	Rank	Economic Freedom Index
Tamil Nadu	1	0.515
Gujarat	2	0.450
Kerala	3	0.447
Andhra Pradesh	4	0.381
Madhya Pradesh	5	0.374
Haryana	6	0.366
Jharkhand	7	0.354
Uttar Pradesh	8	0.347
Karnataka	9	0.337
Maharashtra	10	0.335
West Bengal	11	0.335
Rajasthan	12	0.335
Himachal Pradesh	13	0.317
Jammu & Kashmir	14	0.311
Orissa	15	0.295
Punjab	16	0.290
Chhattisgarh	17	0.266
Bihar	18	0.240
Uttaranchal	19	0.224
Assam	20	0.218

Composite Ranks 2005
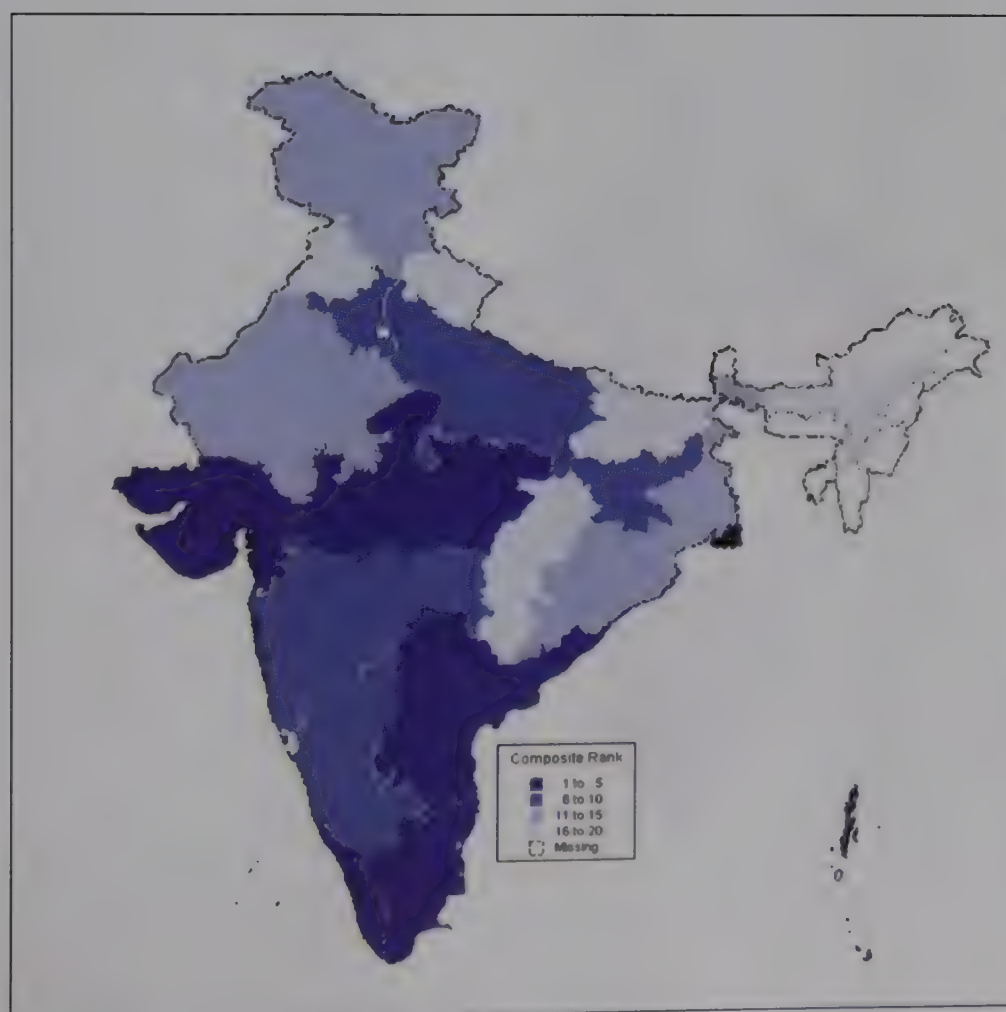
Size of Government
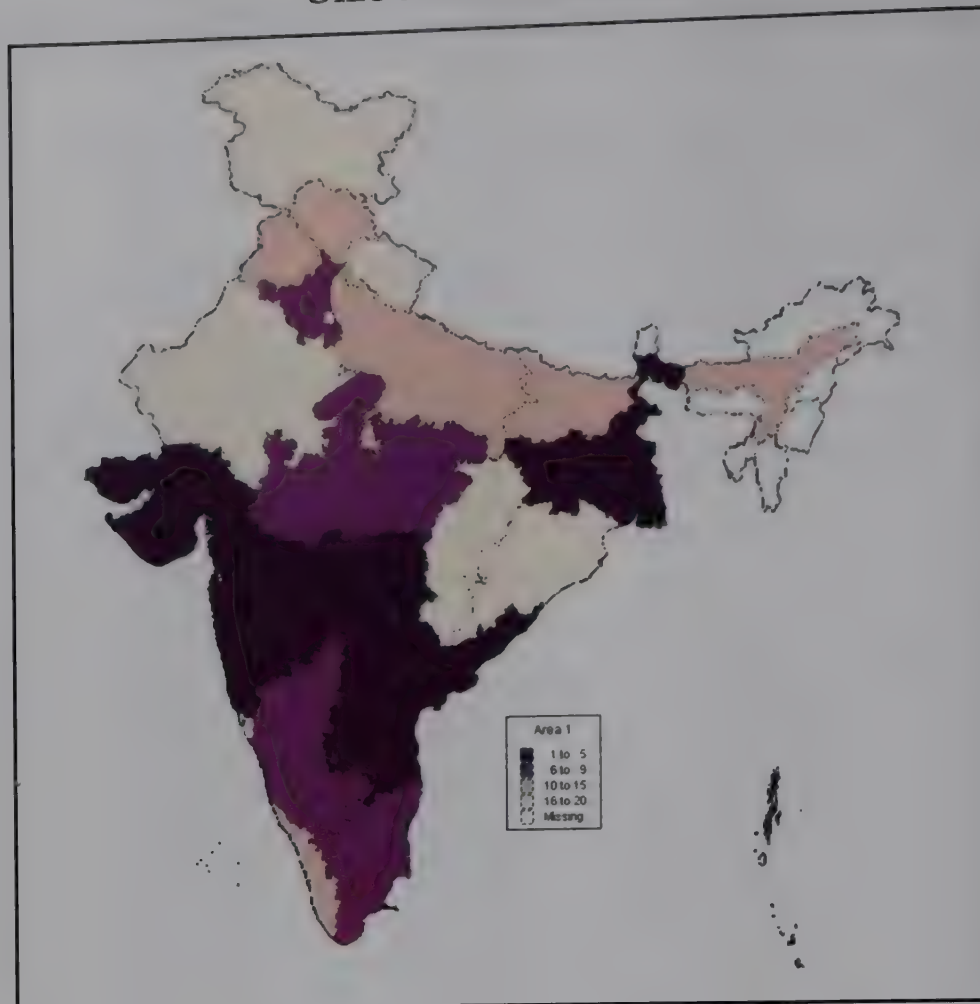
Legal Structure and Security of Property Rights
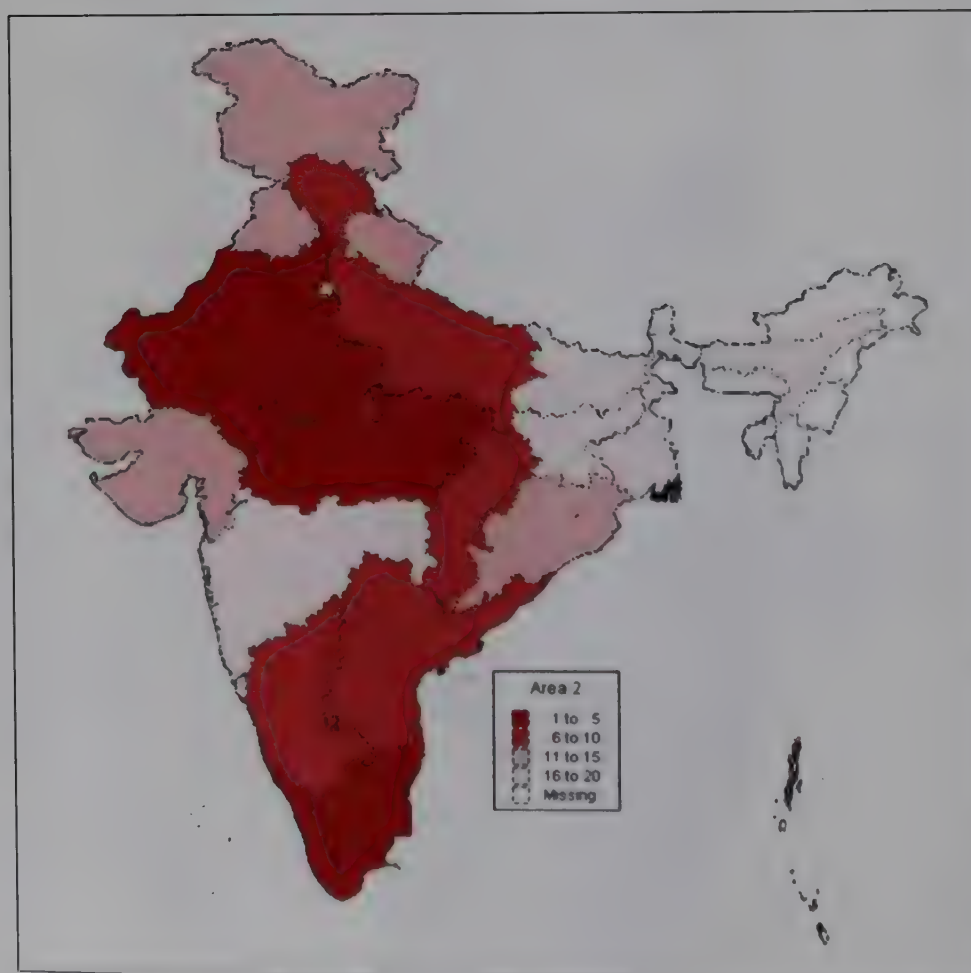
Regulation of Credit, Labour, and Business
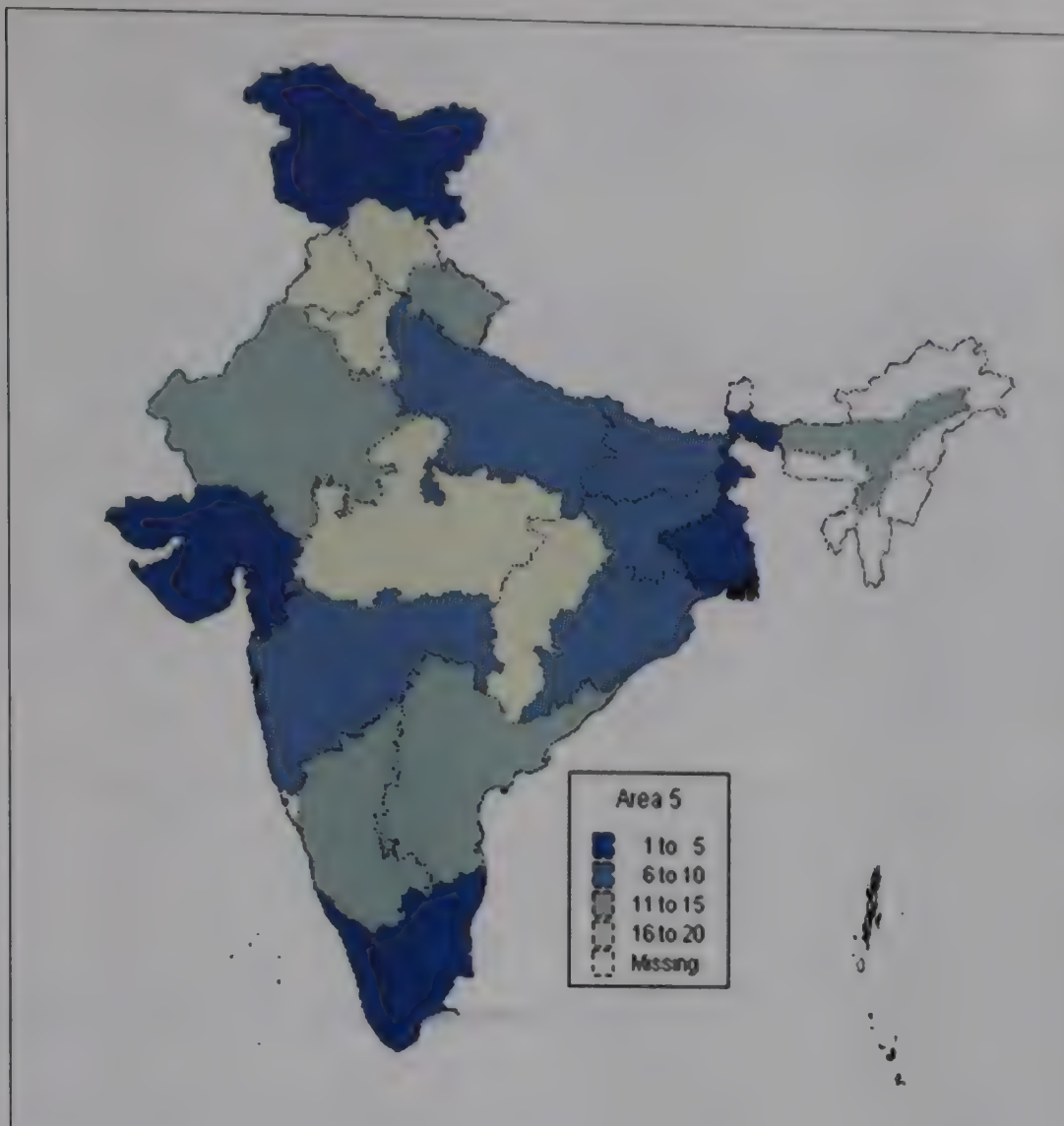
As a conclusion, one is thus left with the following thoughts. First, the North is out-performed by the West and the South. If there is prosperity in the North, that is largely a legacy of past performance. Second, there is a serious law and order cum governance problem in the North, often the exclusive purview of State governments. Third, there is an infrastructure problem, again depending on the nature of the infrastructure, often a public intervention issue. Fourth, there is a problem with both education and health. In the case of higher education and vocational education, this is often a legacy of unnecessary licensing and restrictions on private sector involvement, not only in the case of education, but also some areas of public health. Fifth, and a corollary to this point, there is unnecessary State intervention. In an era of reforms, government intervention should be in the right places, not all over the place, akin to replacing mainframe computers with several PCs. If this space for private participation is broadened and vacated and public intervention focused, the North can, and should, be able to do better. 40% of India's population deserves better.

Chapter 6

The Most Backward Areas of India

6.1 Poverty[10]

The main objective of this chapter is to present estimates of poverty and hunger at the level of districts in India. There is large body of literature on measurement and assessment of poverty in India. However, the measurement and monitoring of poverty for smaller geographical units is a more recent phenomenon. Ever since the National Sample Survey Organisation (NSSO) made the unit record data on consumption expenditure available to researchers, poverty related research on India focused mainly on two issues. First, centralized poverty-specific interventions, it can safely be said, have failed at directing adequate resources to those most deprived. This is reflected in continuing high levels of poverty in the most deprived parts of India. Second, this has also led to the increasing acceptance that poverty-alleviation measures have to be more decentralized than they have been in the past. This was also reflected in the 73rd amendment to the Constitution that mandated the transfer of 23 items from State to district and *panchayat* level.

In this chapter, we concentrate on first issue, that is, on the estimation of poverty levels, using NSSO data from 1999-2000 (55th Round). Our objective is much more ambitious than that attempted by others – we estimate district level poverty. Our work goes one step further. We not only use central sample data from NSS 55th round expenditure schedule, but also combine data on expenditures from the employment schedule in the same round. This is feasible because the households queried for employment and expenditure schedules were different and aggregated consumption expenditure of the households were recorded in the employment schedule also. This method allows us to doubles our sample size. Consequently, we are able to estimate poverty levels for many more districts than if we were to use data purely from the expenditure schedule. The need for disaggregated indicators of well-being is felt more strongly after 73rd and 74th amendments of the Indian Constitution, as statutory bodies at the district level have been charged with numerous development related work.

6.2 Income Poverty at the District Level

In this section, we discuss the incidence of poverty at the district level for 364 pseudo districts spread over all the States and the union territories. The poverty measure reported in this section is the simple Head Count Index, defined as the percentage of population below the poverty norm to total population. It was pointed out earlier that until recently, the poverty incidence was calculated and discussed at the State level, divided into place of residence, rural and urban sector. The long-term trend of State level poverty suggests that in general incidence (of poverty) recorded a trend decline since 1973. The trend was not uniform across States. e.g., southern States recorded a much sharper decrease in poverty ratios compared to States in the eastern region, even though they had almost similar poverty levels at the initial stages.

The study of region level poverty incidence among the regions in most of the States reveals that the overall poverty incidence in the State masks large variation within the States. In general, it is observed that the regions with higher urbanization levels and with the State capital located in those regions tend to have lower poverty incidence compared to the regions located in the interior of the State. This is invariably true for all the major States. These disparities have possibly been one of the key issues that fuelled demand for separate State in several major States. In 1999-2000, out 365 districts for which we have calculated poverty ratios, over 150 districts have poverty incidence higher than the all-India average. 131 districts have more than 30 per cent HCR. These districts combined together account for about only 38 per cent of the total population, but over 62 per cent of the total poor. A further break of these districts shows that there are 71 districts that have poverty levels over 40 per cent. Nearly 21 per cent of India's population and about 40 per cent of the poor live in these districts. This is a point that was mentioned earlier. The map gives a visual depiction. And what is noticeable is that many of these districts are located in the North, especially in UP, MP and Chhattisgarh.

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[10] Based on "District Level Poverty and Hunger Estimates in India" with Amaresh Dubey, August 2003.

Head count ratio
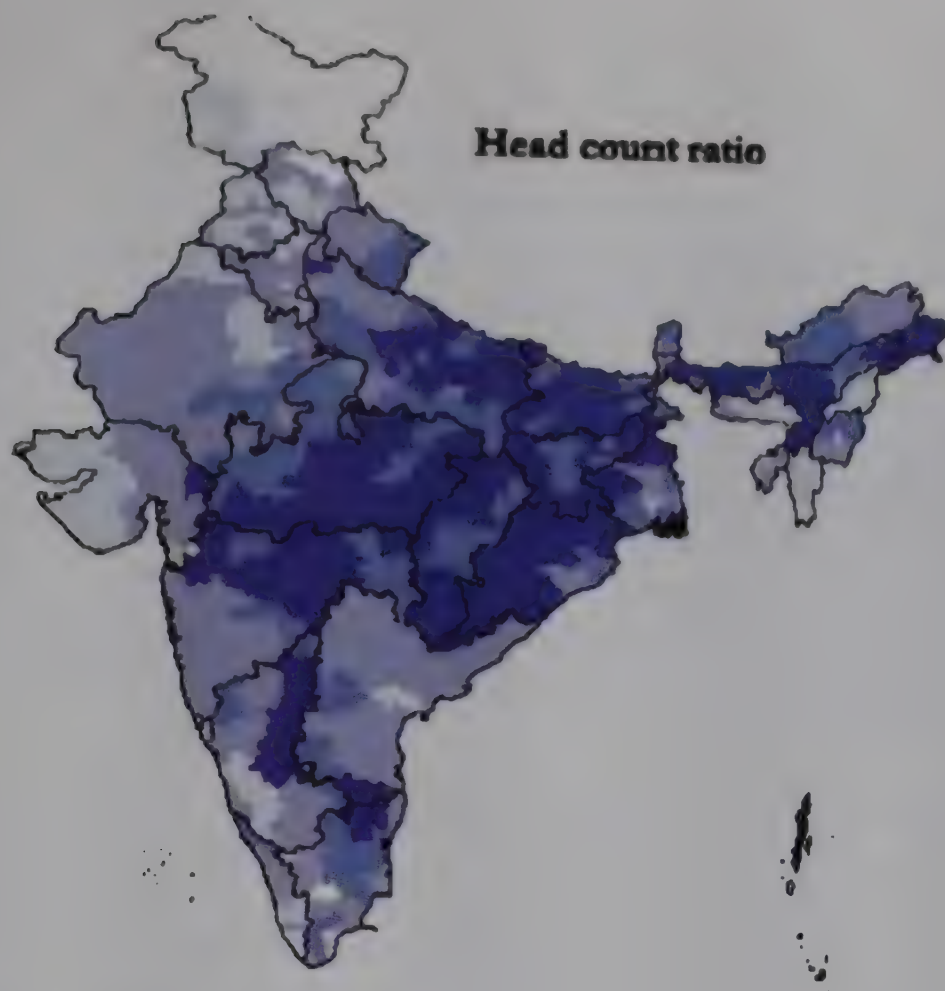
6.3 Deprivation in Basic Health and Education[11]

From income poverty, we now turn to deprivation in health and education. A similar exercise across States is reported in the next figure. It shows that the northern and eastern States of India tend to be performing the worst in most of the criteria.

Table 2: Relative Performance of Indian States

Stage and outcomes	Special Concern: States	
	States performing much worse (as compared to all India by more than 10 percentage points)	States performing moderately worse (as compared to all India by percentage points between 5 to 10)
Proportion of mothers not underweight	Orissa	West Bengal
Proportion of mothers not anemic	Assam, Bihar, Orissa, West Bengal	Meghalaya
Proportion of women Given IFA tablets	Bihar, Rajasthan	Madhya Pradesh, Manipur, Meghalaya
Children at birth weighing more than 2500 grams	Himachal Pradesh, Rajasthan, Uttar Pradesh	Assam, Jammu, Madhya Pradesh, Maharashtra, Orissa, Punjab
Children 1 month to 3 years old not underweight (2SD)		Bihar, Madhya Pradesh, Orissa
Proportion of 1 year olds fully immunized	Assam, Madhya Pradesh, Meghalaya, Nagaland, Rajasthan, Uttar Pradesh, Arunachal Pradesh	
Proportion of 2 year olds given Vitamin A dose	Assam, Bihar, Nagaland, Rajasthan, Tamil Nadu, Uttar Pradesh	Madhya Pradesh, Meghalaya, Arunachal Pradesh
Proportion of 3-5 year olds enrolled in pre-school		Assam, Bihar
Proportion of 6-7+ year olds enrolled in school	Bihar	
Proportion of 8-10+ year olds enrolled in school	Bihar	
Proportion of 10-12+ year olds completed primary	Bihar, Manipur, Meghalaya, Sikkim, West Bengal, Uttar Pradesh, Arunachal Pradesh	Madhya Pradesh, Nagaland, Rajasthan, Tripura

[11] Based on work done with Aali Sinha and Mridusmita Bordoloi.

In the first place, States in the eastern and northern parts of India perform much worse than the rest of the country. Mother's health, as reflected by anemia and weight, are more of a concern in the eastern belt spanning Bihar, W. Bengal, Orissa, and Assam. Similarly, weight of the mother is significantly below the national average for both Bengal and Orissa. Apart from Bihar, the northern States of Rajasthan and Madhya Pradesh also tend to be much poorer in the provision of health services, as reflected in the proportion of mothers who had access to IFA tablets during pregnancy. However, the weight of the child shows up as a matter of significant concern throughout the northern belt. Even States such as Punjab and Maharashtra, that are otherwise among the better off States in most respects, are significantly below the national average.

For children between 1 month to three years, the same States – Bihar, Madhya Pradesh and Orissa continue to be among the poor performers vis-à-vis proportion of children being underweight. Immunization rates are also significantly worse in the northern Hindi-speaking belt, comprising MP, UP, and Rajasthan. The north-eastern states of Assam, Nagaland, Arunachal, Meghalaya, and Nagaland, also have lower than the national average figures. It should also be noted that weight of the child is also affected by the genetic characteristics of the population; in some States, low weight only reflects this aspect. However, we find that either the northern States, or the eastern States, or both, tend to be among the worst performing states in the country.

The above measures are related to health. For the later age groups, we study the enrollment rates across pre-school and primary schools and different age groups. We find that apart from Bihar and Assam, most States are close to the national average in the various age groups. Greater enrollment has been the singular success story of the nineties. However, a large part of that greater enrollment is not translating into greater educational achievement. We find that (as discussed previously) completion rates continue to be below the 50% mark across the country. But here as well, the same set of states – Bihar, West Bengal, UP, MP, Rajasthan, tends to be performing much below the national average.

Since educational achievement is affected by a different set of factors than health outcomes, and since quality plays a significant role in education, our results only indicate that governance failures are showing up as well in different ways. In other words, we find that, whether one looks at measures that are more affected by the efficiency of the government machinery, or those that are more likely to be affected by economic characteristics of the households, a similar set of States are among those performing relatively poorly. This suggests that economic and efficiency factors are the driving forces. These factors may be working in different ways across different age groups and measures studied. However, they repeatedly show that the northern and eastern States are performing poorly.

A range of factors have been studied, but broadly, similar patterns emerge. These are summarized in a general manner:

- Lower castes and rural residents perform poorly in all the measures.

- There has been some improvement in almost all the measures studied. However, this 'improvement' has not been very strong for most measures (the exception being enrolment).

- The differences between female and male children increase in later stages of development.

- Scheduled tribes are the worst-off among most measures.

In addition, the State-level tabulations show that there are large inter-State variations. Most measures indicate that the northern and eastern States have poor and western and southern States tend to have relatively better measures of child development across different stages.

Table 3. State wise status of child health

Year	1998-99	1998-99	1998-99	1998-99
State	NFHS-2	NFHS-2	NFHS-2	NFHS-2
	Proportion of 1 year olds fully immunised	Proportion of mothers who are underweight	Proportion of children weighing more than 2500g at birth	Average Birth weight (kgs)
Andhra Pradesh	60.49	37.14	60.47	2.79
Arunachal Pradesh	24.36	11.19	61.50	2.86
Assam	20.15	26.64	51.74	2.75
Bihar	12.05	39.40	64.55	2.92
Goa	84.79	27.08	55.80	2.75
Gujarat	53.94	37.27	62.36	2.92
Haryana	63.62	26.04	48.52	2.70
Himachal Pradesh	85.20	28.89	47.28	2.63
Jammu	59.44	26.25	50.72	2.71
Karnataka	63.58	38.62	57.82	2.85
Kerala	82.09	18.89	69.26	2.87
Madhya Pradesh	25.71	38.09	51.19	2.79
Maharashtra	81.16	39.46	53.28	2.74
Manipur	43.20	18.58	75.92	3.10
Meghalaya	14.97	24.16	76.24	2.96
Mizoram	62.41	22.44	85.88	3.16
Nagaland	15.43	18.52	80.78	3.30
New Delhi	72.39	11.69	59.48	2.73
Orissa	46.08	47.65	52.97	2.77
Punjab	73.20	16.74	52.37	2.73
Rajasthan	19.74	36.01	47.32	2.69
Sikkim	53.06	11.15	66.81	3.03
Tamil Nadu	89.85	27.57	67.35	2.83
Tripura	42.60	34.91	65.03	2.82
Uttar Pradesh	24.52	35.59	45.82	2.58
West Bengal	46.19	45.21	54.84	2.72
All-India	44.54	35.68	58.76	2.81

Year State	1998-99 NFHS-2 Proportion of 2 year olds who have been given dose of Vitamin A	1998-99 NFHS-2 Proportion of mothers who were given iron folic tablets when children born	1998-99 NFHS-2 Proprotion of children weighing more than 2 SDs of expected weight for height and age	1998-99 NFHS-2 Proportion of 10-12 plus children having completed Primary (or 9-11 plus in grade 4 for states where 4 is final primary grade
Andhra Pradesh	30.42	80.67	89.75	47.60
Arunachal Pradesh	28.30	56.34	89.19	25.55
Assam	16.45	55.47	85.35	36.96
Bihar	11.56	24.15	75.74	23.51
Goa	86.71	95.89	86.33	67.73
Gujarat	57.45	78.87	81.99	44.79
Haryana	57.13	66.53	92.84	36.43
Himachal Pradesh	80.10	84.99	82.32	57.99
Jammu	37.62	71.93	87.09	40.58
Karnataka	57.06	78.91	77.07	58.58
Kerala	47.22	96.16	87.71	78.55
Madhya Pradesh	27.07	50.05	77.27	28.82
Maharashtra	74.39	84.63	79.24	57.34
Manipur	43.30	50.26	91.53	23.68
Meghalaya	25.59	49.18	84.22	11.50
Mizoram	76.29	72.49	88.86	40.57
Nagaland	8.80	42.06	85.35	31.65
New Delhi	40.54	79.43	84.05	56.46
Orissa	45.16	68.35	74.43	43.29
Punjab	63.03	80.36	92.12	35.93
Rajasthan	20.93	40.27	85.15	30.02
Sikkim	57.28	63.16	94.12	22.05
Tamil Nadu	17.27	93.10	80.00	70.48
Tripura	32.94	62.67	82.35	30.25
Uttar Pradesh	15.33	32.91	87.52	26.23
West Bengal	49.55	71.88	85.78	18.03
All-India	**33.58**	**58.07**	**83.07**	**37.73**

Year	1998-99	1998-99	1998-99
State	NFHS-2	NFHS-2	NFHS-2
	Proportion of 6-7 plus year olds still in school	**Proportion of 8-10 plus year olds still in school**	**Proportion of all mothers who are anemic**
Andhra Pradesh	90.15	83.28	49.81
Arunachal Pradesh	76.37	82.82	55.77
Assam	79.28	81.70	69.79
Bihar	58.88	65.48	64.19
Goa	95.85	98.01	36.61
Gujarat	81.49	83.48	46.47
Haryana	87.90	93.45	47.34
Himachal Pradesh	98.52	99.14	33.70
Jammu	84.43	88.07	48.80
Karnataka	84.59	86.38	42.11
Kerala	95.29	99.12	23.02
Madhya Pradesh	75.20	82.55	54.38
Maharashtra	87.54	94.07	47.98
Manipur	89.17	91.58	27.48
Meghalaya	78.00	85.56	60.61
Mizoram	92.01	92.51	45.39
Nagaland	88.02	88.97	31.77
New Delhi	90.44	93.24	41.29
Orissa	82.47	83.87	63.80
Punjab	93.24	94.85	41.93
Rajasthan	76.58	80.36	48.10
Sikkim	91.35	92.38	47.89
Tamil Nadu	97.36	95.67	55.86
Tripura	88.88	93.99	
Uttar Pradesh	77.23	80.83	47.55
West Bengal	81.40	84.56	63.17
All-India	**80.04**	**83.41**	51.45

Chapter 7

Industrial Corridors in India[12]

7.1. Background

This chapter identifies the industrial corridors (two or more contiguous districts) in India with a special emphasis on their further potential. Using Principal Component Analysis, the chapter finds that there are five major and three minor industrial corridors in the country. The distribution pattern of these corridors reveals the domination of the western and the southern part of India. The northern region does have a large corridor around Delhi, but the rest of the region is quite limited in this respect. The western coastal region is found to be the region with the highest level of industrial activity in the country. The southern part of the country has the maximum proportion of districts covered by a major or minor corridor. The eastern region however has only two corridors - a major one around Calcutta, and a minor one in the north-east.

Appropriate location of any productive activity is one of the key factors in its success. Hence, be it agriculture, manufacturing or services, the proper location of any activity can determine whether it succeeds or fails. This chapter studies various locations in India as the destinations for manufacturing activity. Specifically, based on latest available data, it attempts to identify the more productive locations of manufacturing activity in the country.

What is a good location for a manufacturing activity? Admittedly, the answer to this question depends upon the characteristics of the particular activity. For some industrial sectors closeness to major input is important, for others the climatic conditions might be of paramount importance. This paper attempts to identify the locations on the basis of factors that affect all manufacturing activity. Thus the chapter attempts to differentiate various regions in the country on the basis of their manufacturing activity. The identification of these locations requires a three-step procedure.

1. Identification of the most important characteristics of a good location.

2. Collection of relevant measures of those characteristics.

3. A single rating of all the districts – based on a system that is able to integrate the position of a particular district vis-à-vis the various characteristics identified as important.

This chapter further develops this procedure by identifying the industrial corridors (two or more contiguous districts) with a special emphasis on their further potential. It therefore becomes necessary to measure not only current manufacturing activity, but also other factors that support this activity. These other factors, in many but not all cases, also reflect socio-economic development. This study however focuses on characteristics that are conducive to manufacturing activity.

7.2 Characteristics of a 'Good' Location

There are many location specific factors that affect the functioning of a manufacturing activity. Apart from infrastructure support, a 'good' location for any activity essentially requires the presence (of at least some) of:

- Adequate and skilled labour force.

- Easy access to inputs.

- A large market for its produce.

- Connectivity with the rest of the economy.

- Other backward and forward linkages.

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[12] Based on work done with Dripto Mukhopadhyay.

Availability of natural resources, particularly mineral resources, and adequate water availability may be other important factors but as the experience of many countries shows, are not essential.

The bulk of the relevant discussion in the literature is contained in two broadly defined sets of previous studies: (a) the debate on industrial dispersal policies and, (b) the promotion of infrastructure facilities in various parts of the country. In addition, some domestic and international surveys regarding the same have also been conducted. It was found that infrastructure related issues play a key role. Other factors that play an important role are mentioned below:

a) Forward and backward linkages,

b) Social infrastructure,

c) Living conditions,

d) Presence of human capital in the vicinity, and

e) Level of industrial activity in the area.

The following are some of the important factors that were included in the identification of industrial corridors:

- Workforce involved in non-household manufacturing,

- Households using cooking gas and those having sanitation, electricity and safe drinking water facilities, and having pucca houses,

- Literacy,

- Consumption of HSD and motor spirit,

- Bank deposits,

- Number of scheduled commercial banks,

- Bank credit to industry,

- Non- agricultural establishments, and those with power,

- Degree of urbanization and number of large towns, and

- Access to national highways, *etc*.

The development levels of the districts can be captured through a broad set of indicators like demographic characteristics, available social amenities and quality of life of the residents, available facilities, economic condition and the potential demand in these districts. All these factors reflect the overall development of a particular district in any region or state. In addition high manufacturing activity is also associated with greater employment in non-agro activities, financial sector variables, energy consumption *etc*. Thus, a methodology which essentially involves construction of a single composite index is needed to aggregate the information contained in these variables. Once the appropriate variables were identified with the help of the relevant literature survey, the data collected and codified, the procedure based on a *factor analytic model* was adopted. This is briefly mentioned below.

7.2.a Developing a Single District Level Rating for Manufacturing Activity

Since many factors affect the level and attractiveness of manufacturing activity in a district, it is essential to form a composite index. This composite index should incorporate many variables into one single measure. Principal Components Analysis (henceforth PCA) was used to generate a composite index as that reduces the levels of subjectivity on part of the researcher.

7.2.b Identifying Industrial Corridors

Once a composite index for all the districts was created, it was possible to study the various parts of the country that possessed a high rating. When two or more contiguous districts were seen to possess a high rating they were identified

to be the part of an industrial corridor. Thus it was possible to identify five major and three minor industrial corridors in the country.

The main Industrial Corridors identified are presented below. Along with these major corridors, minor corridors have also been identified which are presented in the same figure. To keep the discussion simple, further discussions will concentrate on all the industrial corridors – irrespective of their importance. It should be noted that while demarcating the corridors a few districts are included within the corridors that did not receive a high rating. These districts play the role of connecting districts, as they are located between stretches of highly rated districts.

Table 1: Identified Major Industrial Corridors of India

Corridors **Major Corridors**	Districts	Geographical Region
Western Corridor	Junagadh, Jamnagar, Rajkot, Amreli, Bhabnagar, Surendranagar, Mehsana, Gandhinagar, Ahmadabad, Kheda, Bhadodara, Bharuch, Surat, Valsad, Nasik, Thane, Pune, Raigad	This corridor stretches from southern Gujarat region to the Konkan coast of Central Maharashtra.
Northern Corridor*	Ludhiana, Jalandhar, Patiala, Rupnagar, Kapruthala, Amtitsar, Bhatinda, Faridkot, Ferozpur, Gurdaspur, Hoshiarpur, Sangrur, Ambala, Faridabad, Karnal, Kurukshetra, Panipat, Rewari, Rohtak, Sirsa, Yamunanagar, Sonipat, Bhiwani, Hissar, Jaipur, Ajmer, Ghaziabad, Meerut, Dehradun Haridwar, Solan, Sirmaur, Simla.	It stretches out in the geographical region from northern Gangetic plain, includes the area of Indus valley along with the northern foot hills.
South-Western Corridor	South Goa, North Goa, Uttar Kannad, Dakshin Kannad, Bangalore Urban, Bangalore rural, Kasargod, Kannur, Kodagu, Kozhikode, Mysore, Wayanad, Malappuram, Nilgiri, Periyar, Coimbatore, Thrissure, Ernakulam, Kottayam, Thiruchirapally, Madurai, Pathanamthitta, Iduki, Alappuza, Kollam, Thiruvananthapuram, Kamrajar, Chidambaranar, Tirunelveli Kottabomman, Kanyakumari.	This long elongated corridor spreads from southern Konkan Coastal area including the entire Malabar coast. It also covers a substantial part of the southern Deccan region.
Eastern Corridor	Calcutta, North 24-Parganas, Haora, Hugli, Nadia, Barddhaman, Dhanbad, Ranchi, East Singbhum	This narrow corridor is extended from Gangetic delta to the Chhotanagpur Plateau.
North-Central Corridor	Kanpur, Lucknow	A small corridor in western UP
Minor Corridors		
Central Corridor	Ratlam, Ujjain, Indore, Dewas, East Nimar, Jalgaon, Aurangabad, Akola, Amravati, Wardha, Nagpur, Yavatmal And Chandrapur.	This corridor runs between the Malwa region and the northern Deccan areas.
South Eastern Corridors	Rangareddy, Hyderabad, Guntur, Krishna, West Godavari, East Godavari, Vishakhapatnam, Madras, Chengai- Anna, North Arcot, Chittoor, Nellor	This narrow corridor is extended from Gangetic delta to the Chhotanagpur Plateau.
North Eastern Corridor	Tinsukia, Jorhat, Dibrugarh and Sibsagar	This region extends from Jorhat to Tinsukia district of Assam.

The distribution pattern of these corridors reveals the domination of the western and the southern part of India.[13] The western coastal region is found to be the region with the highest level of industrial activity in the country. This region is gifted with natural locational advantages. The presence of major and a large number of minor/intermediate ports has further facilitated the development of the region. Among the other corridors, the northern corridor is stretched over a region that has grown very fast in agriculture during past two/three decades. Besides these major corridors, a few minor corridors have also been identified by this chapter. A detailed discussion on the corridors is in the later part of this chapter. The focus here, as has been stated before, is on the identification of areas that possess good location-al advantages for manufacturing activities. In doing so the basic analysis is conducted at the district level. District level analysis offers the main advantage that it is at a much more dis-aggregated level than region or state specific analysis that is sometimes conducted. This allows the study of such issues for almost the whole country, and few areas need to be excluded from the purview of the study. Note that the 'district' being the unit of analysis, enabled the identification of Industrial Corridors that are spread across more than one state.

7.3 Literature

That the lack of appropriate infrastructure facilities is acting as a major bottleneck in the economic growth/development in India is already well known.[14]

The literature suggests that generally policies on industrial location have aimed at a fair distribution of industries across the entire geographical areas of a country or region.[15] Experiences from many countries suggest that mostly these policies remained ineffective and failed to disperse the industries in the desirable direction.[16] The failure of these policies calls for understanding the underlying dynamics of industrial location decisions. The most important role played in industrial locations is probably the presence of a certain level of economies of scale. Concentration of resources, capital as well as labour, along with the availability of basic infrastructure for industries are of the prime importance for location decisions. This also calls for an efficient operation of backward and forward linkages in the region of location which is achieved through a complimentary manufacturing activities in the vicinity. A strong backward and forward linkage provides the firms the advantage of working in an environment with lower transport cost for acquiring the raw materials as well as for marketing of the finished products. Other facilities such as provision of banking, transport operation etc. also work at a more efficient level with a certain amount of conglomeration in the industrial activities. The other important factor to be mentioned is the easy availability of skilled labour force within the region which is possible only if there is a presence of a considerable number of industries in a region. The above discussion reveals that the concentration of industries is the culmination of a few decisive factors which are essential for the smooth operation of industrial activities.

Studies suggest that there was hardly any indication of existence of industrial location policies in India before Independence. At the time of Independence the Indian industries were mostly concentrated in a few nodes such as Calcutta, Bombay, Madras, Ahmedabad *etc*. Most of the major ports had been developed as large industrial centres at that time. This pattern was a reflection of the colonial rule in the country. With the progress of time the Indian government started taking more interventionist role in the location decisions of the industries. Most of the regional policies have come into effect since late sixties only. One of the firsts in pioneering the dispersal efforts was that of the government of the state of Maharashtra. The initial impetus for evolving an industrial dispersal policy was provided by the emerging problems of congestion and deteriorating conditions of the civic and other amenities and services in the fast growing region of Bombay. A wide range of policies and programmes were undertaken to arrest the growth of industries in the Bombay-Thane-Pune belt and creation of supporting infrastructures in other areas of the state.

Since the beginning of the planning, the Central Government has stressed on the industrial development of the backward areas of the country. The first five year plan mentioned that "if industrial development in the country is to proceed

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[13] Though a large number of districts in southern part of India, particularly, from Kerala are included in the industrial corridors, many of these districts are *bottlenecked* districts.

[14] See Government of India, *India Infrastructure Report: Policy Imperatives for Growth and Welfare*, Expert Group on the Commercialisation of Infrastructure Projects, Ministry of Finance, New Delhi, 1996.

[15] Mohan Rakesh, *Industrial Location Policies and Their Implication for India*, Ministry of Industry, Government of India, 1993.

[16] Mohan Rakesh, 1993.

rapidly and in a balanced manner, greater attention will have to be paid to the development of these states and regions which have so far remained backward."[17] The plan, however, only pointed out the large potential of industrial development in several backward states and observed that it would be desirable in order to secure a balanced regional development in the country. In all other five-year plans it was suggested that the dispersal should be aimed towards developing the backward areas so that the differences in the levels of development between different regions is progressively reduced.

7.4 Delineation of Industrial Corridors

Through Principal Component Analysis, the value of the composite index of the districts of the selected States have been computed. The districts have been categorized on the basis of the values of this composite index. The districts have been divided into five categories on the basis of the mean and the standard deviation of the composite index values. These groups are ranked as very high, high, moderate, low and very low/least. [18]

The delineation of industrial corridors was conducted in the following manner. First, the first two 'types' of districts ('very high' and 'high' potential) were chosen. In most cases these by themselves showed up as contiguous industrial corridors. Next, the districts bordering these two categories were studied. In most cases these were of the type 3 category ('moderate') and in very few cases type 4 category ('less').

A regional distribution of different categories of districts is given in table 7. It is useful to define those regions beforehand to understand the distribution pattern of the districts. The Northern region consists of Punjab, Haryana, Uttar Pradesh and Himachal Pradesh. The western region is formed including the states of Maharashtra, Gujarat, Rajasthan and Goa. The states of Tamilnadu, Kerala, Karnataka and Andhra Pradesh form the southern region while the districts of Bihar, Assam, West Bengal and Orissa are there in the eastern region. The districts of Madhya Pradesh are considered for the central region.

The general distribution pattern of different categories of districts shows that type 1 category has the least proportion of the total districts in the country. The largest share is found in the type 4 category which is as high as 43 per cent. The first three types of the districts together account for about 45 per cent of the total districts in the country.

The region-wise distribution of different types of districts reveals a few important points. The northern and the western regions together share about 65 per cent of the type 1 districts identified in India. In the eastern region only 3 districts are found in this category. In type 2 category of districts larger shares are found for the northern and the southern region. The eastern and the central region are again found to have low share of this type of districts. Almost the same pattern is observed for the type 3 districts where the domination of the northern, western and the southern region continues. The change is observed for last two types of districts, i.e. type 4 and type 5 districts. In the fourth category of districts the central region which has a very low share of the total districts of India records very high proportion. The eastern region dominates the type 5 category of districts with a large share of about 54 per cent. The western region is found to have the least proportion of this category of districts. An interesting issue that emerges from this table is that a large proportion of the higher rated districts for industrial development is concentrated in northern, southern and the western regions of India.

To understand the intra-region distribution pattern of different types of districts and its comparison across the regions the data is given in the table below.

Table 2 : Intra-region Distribution of Districts of Different Categories

| Region | Region-wise Percentages of Districts across Type | | | | | |
	Type 1	Type 2	Type 3	Type 4	Type 5	Total
Northern	10.91	19.09	18.18	38.18	13.64	100.00
Western	14.10	20.51	20.51	39.74	5.13	100.00
Southern	10.39	25.97	24.68	38.96	0	100.00
Eastern	3.52	10.59	8.24	43.53	34.12	100.00
Central	4.44	6.67	13.33	62.22	13.33	100.00

[17] Government of India, Planninmg Commission, *The First Five Year Plan*, New Delhi.

The above table suggests that the most skewed distribution of districts is found in the eastern and the central regions. In the eastern region the type 1 districts are as low as 3.52 per cent where as the last two types, i.e., type 4 and 5 account for about 80 per cent of the total districts in the region. The situation is almost similar for the central region too. In case of all other three regions, the first three types of the districts which possess the conducive environs for future industrial development account for more than fifty per cent of the total districts of the region.

Most of the very high rated districts are located in and around the coastal region. A few exceptions to this trend are the districts like Ludhiana, Jalandhar, Ambala, Lucknow, Bhopal, Indore, Bangalore etc. This is also true for the high and moderate rated districts. Only a few districts of the eastern coast like Ramanathapuram, Pudukottai, Thanjavur, South Arkot of Tamil Nadu, Vizianagaram and Srikakulam of Andhra Pradesh, Ganjam, Cuttak, Balasore of Orissa and Medinipur and South Twenty Four Parganas of the State of West Bengal are rated lower. Not a single district of the western coastal region is found to be in the 'least' category. A large number of the very low rated districts are located in the Bihar-Nepal border. Because of the uneven terrain and adverse climate these districts are devoid of substantial economic activities.

The pattern clearly reveals that the most highly rated districts are largely concentrated in or around the coastal region of the country. This phenomenon is common all over the world and not unique to India. In most of the countries it is observed that the coastal regions are ahead of other regions particularly in terms of economic activities. In fact, apart from economic factors geographical factors too play an important role in determining the level of economic development of a place. It is found that the longer the coast line of a country the higher is its level of economic development. The present study indicates that India is no exception to the general trend that is prevailing in other parts of the world. Some districts with higher ratings are also concentrated in parts of northern India. The present study identifies a significant difference between the western and the eastern coastal region.

Port related hindrances may be one reasons behind the differences. There are 11 major ports among which six are located in the western coast and five are located in the eastern coast. Besides these major ports there are about 148 minor or intermediate ports distributed through out the coastal belt of the country. The location pattern of these major and minor/intermediate ports are stated in table 3.

Table 3: Corridor-Wise Distribution of Major and Minor/Intermediate Ports

Corridor	Major Ports	Minor/Intermediate Ports	Total Ports
Western	3	93	96
South-Western	3	31	34
South-Eastern	3	22	25
Eastern	2	2	4

Source: *Indian Ports*, Vol.28, No. 3, Indian Ports Association, New Delhi, 1997

The above table reveals that the number of ports in the western region is much higher than in other regions of the country. Among 159 ports in India 96 are located in the western region which accounts for more than 60 per cent of the total ports in the country. Though the difference in number of the major ports is not significant, minor or the intermediate ports causes the large differential between the western and other regions of the country. The south-western region follows the western region with the second largest number of ports. Therefore it may be perceived that as a large number of minor or intermediate ports are located in the western and the south western regions of the country, the port related economic activities would also be at a higher level in these region. Only four ports are located in the eastern region which accounts for less than 3 per cent of the total ports in India.

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[*] The intervals for all the groups are one standard deviation, except for the category 'moderate'. This category is formed with an interval of half standard deviation above the mean.

7.5 Bottlenecks within the Industrial Corridors

This study has attempted at identifying the important corridors for future industrial development considering a large number of variables which belong to a few broad categories. The districts have been categorized on the basis of composite index which are derived through the Principal Component Analysis. This composite index is the reflection of the overall development related to those factors which are essential for industrial development. For most of the districts it is found that the index values maintain a consistency over different broad categories of indicators. (That is, a district that shows a high rating in one category is also likely to show a rating in other categories) However, in a few cases it was seen that a high rating was not present in all the categories. For instance, a district may have a high level of economic activity but be poor in terms of social amenities. If the social amenities would also have been of the high order, the district would have performed even better. This is the *bottlenecked* a district is facing which might be affecting the overall performance of the corridor, and such districts are henceforth referred to as *bottlenecked districts.*

The identification of the bottlenecks was done in the following manner. First the standard deviation of the index values (of the 5 categories calculated in the intermediate stage of the multi-stage PCA), were calculated. The districts for which the standard deviation was found above the average of the standard deviations for all districts were considered as the bottlenecked districts. Second, those districts were also considered to be 'bottleneck-ed' where one or more factor/factors show a substantially lower level of development compared to other factors. A list of these 'bottleneck-ed' districts is given in the table below.

Table 4 : Distribution of the 'Bottleneck-ed' Districts

Corridor	No. of 'Bottleneck-ed' Districts	'Bottleneck-ed' Districts
Northern	9	Sangrur, Agra, Tehri Garhwal, Meerut, Varanasi, Kurukshetra, Simla, Sirmaur, Gurdaspur.
Western	3	Amreli, Bhavnagar, Raigad.
South-Western	13	Bangalore Rural, Idukki, Wayanad, Kodagu, Alapuzha, Kottayam, Kollam, Kozhikode, Kassaargod, Cannur, Nilgiri, Kamrajar, Kanyakumari.
South-Eastern	1	Anna-Chengai MGR
East	4	Jorhat, Dhanbad, Sundargarh, North 24 Parganas.
Central	0	–

The above table reveals that a total of 30 districts have been identified as the bottlenecked districts in the identified industrial corridors. The south-western corridor possesses maximum number of these bottlenecked districts followed by the northern corridor. The central corridor is without even a single bottlenecked district, while the south-eastern corridor has only one bottlenecked district.

Identification of the districts having bottlenecks for future industrial development calls for specification of those bottlenecks present there. In the following table the bottlenecked creating factors for the bottlenecked districts are shown.

Table 5: Factors Creating Bottlenecks in the Major Identified Corridors

Corridors/districts	Factors creating bottlenecks
Western	
Amreli	Facilities
Bhavnagar	Facilities, Social Amenities
Raigad	Facilities
South Western	
Bangalore Rural	Facilities
Idukki	Facilities
Wayanad	Facilities
Kodagu	Economic
Alpuzha	Demographic
Kottayam	Facilities
Kollam	Demographic
Kozhikode	Potential Demend
Kassargod	Potential Demand
Cannur	Potential Demand
Nilgiri	Facilities
Kamrajar	Facilities
Kanyakumari	Demographic, Potential Demand
South Eastern	
Chengai Anna	Demographic
Northern	
Sangrur	Facilities
Agra	Demographic
Tehri Garhwal	Economic
Meerut	Demographic
Varanasi	Demographic
Kurukshetra	Facilities
Simla	Economic
Sirmaur	Facilities
Gurdaspur	Demographic
Eastern	
Jorhat	Economic, potential demand
Dhanbad	Facilities
Sundargarh	Potential Demand
North 24 Parganas	Demographic, Potential Demand

The above discussion shows that the presence of the bottlenecked districts within industrial corridors is higher in the northern and the southern region of the country. If we remove potential local demand from consideration, then the northern areas show up worse. As these identified bottlenecked districts are otherwise conducive for the industrial development in terms of most of the other broad indicators small amount of investment should be able to remove these bottlenecks. If special attention is given to these short comings within the corridors with specificity, the concept of these future industrial corridors would be more effective and fruitful for the coveted industrial development of the country.

7.6 Conclusion

The delineation of the industrial corridors is based on the premise that the first three categories, namely, type 1, type 2, and type 3, are most suitable to be the part of the industrial corridors because of the presence of conducive environs for

industrial activities. While identifying the industrial corridors it is kept in mind that the districts chosen for this purpose should be contiguous so that the economies of scale, scope, and the agglomeration effect can easily be achieved. The areas which have been identified as the industrial corridors of the country are given in Figure 1. This study has identified six major corridors. These corridors are named as Western corridor, South-Western corridor, Southern corridor, Eastern corridor, South-Eastern corridor, Northern corridor and the Central corridor. The South-Western corridor stretches between Gujarat and Maharashtra. It extends from the south of Gujarat to Raigad of Konkan coast in Maharashtra. Almost contiguous with this is the South Western corridor. It extends from Goa to Kanyakumari covering the entire Malabar coast. This corridor also covers a large part of the interior Deccan including Bangalore, Madurai etc. A narrow but important corridor is identified in the eastern part of the country which covers part of Bihar and West Bengal. This corridor stretches from the district of North 24 Parganas of the Ganga delta to Ranchi of the Chhotanagpur plateau. This corridor is endowed with rich mineral resources as well as other natural resources.

The south eastern corridor extends from the north coastal Andhra Pradesh to the northern part of Tamilnadu covering Hyderabad and Rangareddy. The Northern corridor covers the part of Indus valley, Upper Ganga plain and a part of the foot hills of the Himalayan region. It includes the districts which are the areas of high agricultural productivity along with commensurate industrial activities that covers important industrial clusters of India. It also covers the areas which act as the gateway to the Himalayan region thus providing the linkage with the plain land. The Central corridor consists of the districts of the Malwa plateau and the part of the Deccan plateau. Besides these major corridors there exist a few other corridors which do not have much either not very potential for industrial development or are not substantially large or continuous to reap the benefit of agglomeration economies or the complementarity within a corridor.

The present study has also brought out the bottlenecks existing within the identified corridors. Certain factors did not show a rating as high as other important factors considered. These would need to be developed further in order to ensure that the district possesses a good combination of various criteria required for a high level of industrial activity. However a study focusing only on the bottlenecks aspects would be required to generate more in-depth recommendations on these bottlenecked areas.

Study of the available infrastructure facilities, such as, power availability, water availability, road and railway facilities and other modern communication facilities etc. are of great importance to frame this sort of 'location' development policies. These were *not taken into consideration* in this study. The other factors considered such as economic and industrial activity, facilities etc. already reflect the quality and quantity of these facilities.

Once the areas have been identified on the basis of current and potential activity, then the presence of these infrastructure facilities should be taken into consideration in designing an overall infrastructure investment policy. Further study on the availability of these infrastructure facilities would prove to be complementary to the findings of this study and would help in formulating a comprehensive policy for future industrial development of the country. The second stage would require a much more in-depth information on infrastructure facilities, water availability and such issues. Because of the restrictive data availability, this study could not highlight these basic infrastructure facilities of the districts under consideration.

Chapter 8

An Economic Profile of Major States

We conclude this paper with a brief thumbnail sketch of the Northern States.
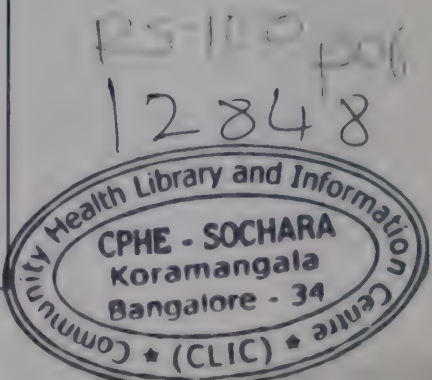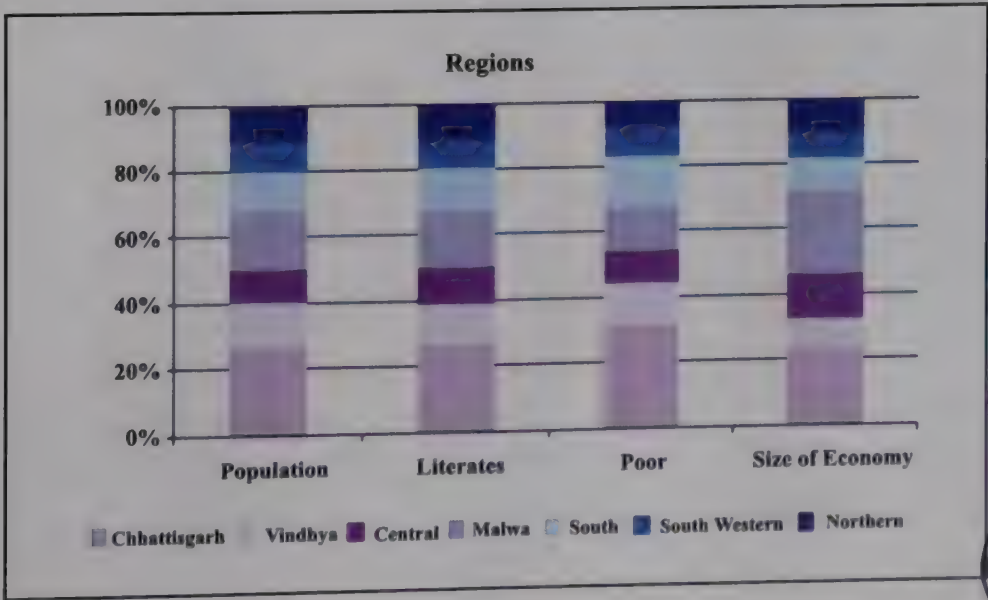
Introduction

Chhattisgarh

Chhattisgarh is also sometimes referred to by its ancient name - Southern Kosal. It is located in the eastern part of the country – east of the new Madhya Pradesh and South of Jharkhand. It has a large tribal population (about 37 per cent of its population). Chhattisgarh has one-third undivided Madhya Pradesh's area and population, but 44 per cent of undivided MP's forestry resources. Other than forestry, there are mineral (bauxite, coal, iron ore) and power resources. There are cement factories and the steel plant in Bhilai. The super thermal power plant in Korba produces aluminium. Once irrigation expands, the Mahanadi basin has considerable agricultural potential. Universities are in Raipur and Bilaspur. Out of the 16 districts, the largest in terms of population is Raipur, followed by Durg. The decadal (1991-2001) rate of growth of population is 18.06 per cent. Urbanization is 20.08 per cent. The literacy rate is 65.18 per cent, 77.86 per cent for males and 52.40 per cent for females.

The State includes sixteen districts – Bilaspur, Raigarh, Sarguja, Raipur, Durg, Korea, Korba, Dantewada, Mahasamunda, Kavardha, Champa, Janjgir, Jashpurnagar, Kanker, Dhamtari, Rajnandgaon & Bastar. It is surrounded by mountain's series of Mekal, Sihava & Ramgiri. Rivers such as Mahanadi, Godavari, Rihand, Shivnath, Indravati, Hasdo & Kharun pass through it. Despite the prevalence of rivers less than 20 per cent of its area is irrigated. Though Chhatisgarh is one of the poorer regions of the country, it has some very important strengths. First is its mineral potential. Second is its great natural tourism potential. And third is its manufacturing potential. All in all Chattisgarh's story is one of great promise but that will of course depend on how the new State is governed in its infancy.

Annual Growth in the 1990's

Variable	Growth rate *	Variable	Growth rate *
Population	**1.9**	**GSDP**	3.3
Literacy*	0.1	**Agriculture GSDP**	**2.4**
Female literacy*	**2.1**	Manufacturing GSDP	5.8
Forest cover	-0.6	**Finance GSDP**	**16.9**
Poverty*	-0.6	Commercial Bank Deposits	9.4
Two wheelers	9.9	Commercial Bank Credit	7.7

*Annualized percentage point changes

Chhattisgarh has only one region. However it had been a part of Madhya Pradesh until the recent split. Chhattisgarh can thus be compared to the other regions of MP. Chhattisgarh is geographically approximately one third of old MP. However, it had only about one fourth of its population. While the number of literates is almost proportional to its population size, it had a proportionally larger share of the poor and smaller share in the economy. This would mean that the growth rate of population for MP aggregated would be an underestimation for Chhattisgarh and the poverty in Chhattisgarh would be reducing at a slower pace than for MP as a whole. The Vindhya and Southern regions of the new State of MP have a distribution similar to that of Chhattisgarh. That is, all these regions have a larger share of the poor and a smaller share in the market size than warranted by their respective population shares.
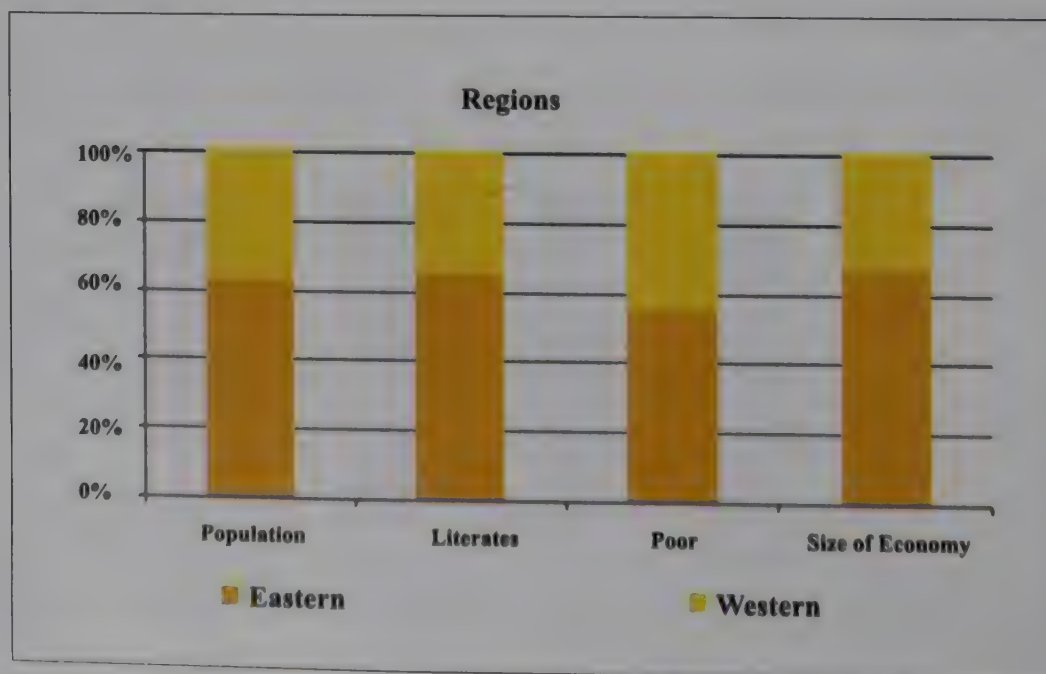
Haryana

Although Haryana has no perennial rivers (the only river is Ghaggar), growth in agricultural production (foodgrains, oilseeds, sugarcane, cotton, milk) has been phenomenal since Haryana was formed in 1966. This was India's first State to have electrified all its villages. There are also several industries (cement, sugar, paper, cotton, textiles, glassware, brassware, cycles, tractors, two-wheelers, automobiles and auto ancillaries, white goods, electronics, engineering), with 1,023 large and medium industries and 79,678 SSI units. Tourism was declared an industry in 1993. The decadal (1991-2001) rate of population growth is 28.06 per cent and urbanization is 29 per cent. The literacy rate is 68.59 per cent, 79.25 per cent for males and 56.31 per cent for females. Of the 19 districts, the largest in terms of population is Faridabad. The progressive and innovativeness of its governance has contributed to its better performance than most States in the past. There is close to nil tourist potential in the State, and so the State used its connectivity to Delhi and Punjab and developed a rich highway-motel-restaurant base. Though Haryana was traditionally known for its farmers and its dynamic agriculture, increasingly Haryana has been diversifying its economic base. Haryana is becoming one of the most important centers of the industrial landscape of India as well. It has exploited its closeness to the markets and commerce of Delhi to develop one of the largest automobile and ancillary base in the country. All this has happened only in the last two decades. But that is not all, increasingly it is attracting highly skilled professionals and also some of the most rapidly going firms in India into its borders. It possesses good levels of infrastructure, and that has been one of its strengths.

Annual Growth in the 1990's

Variable	Growth rate *	Variable	Growth rate *
Population	2.5	GSDP	5.6
Literacy*	1.3	Agriculture GSDP	1.2
Female literacy*	1.6	Manufacturing GSDP	7.6
Forest cover	.	Finance GSDP	14.6
Poverty*	-2.6	Commercial Bank Deposits	13.4
Two wheelers	11.3	Commercial Bank Credit	11.3

*Annualized percentage point changes

Though Haryana is one of the most agriculturally prosperous states, its position is not as impressive in environment mainly due to high levels of pesticides and fertilizers used by its agrarian economy. Significantly, the high use also contributes to its good performance in agriculture. Poverty is declining at a rapid rate, much more than most other States. Haryana's performance will improve significantly if these growth rates are sustained. Though agriculture GSDP does not exhibit very high growth rates, it is on a high base achieved in the past. GSDP overall and manufacturing in particular are growing at reasonably high rates. Population growth portrays some cause for concern, but the overall picture appears positive for the future. The Eastern region of Haryana dominates it in all the four categories. Its geographical closeness to the markets of Delhi is one of many factors behind this. The Western region which has a smaller share of literates also exhibits a larger share of the poor. Overall, however, Haryana does not have a high level of sub-State disparities. The share in the economy of the two regions is almost proportionate to their respective shares in the population, with the eastern region getting only a marginally higher share.

Himachal Pradesh

Himachal Pradesh is almost entirely mountainous and snow-fed and perennial rivers like Chenab, Ravi, Beas, Sutlej and Yamuna provide considerable hydel potential. Historically Himachal Pradesh was on the trade route to Tibet and Central Asia. Even trade between the rest of the country and the Kashmir Valley passed through what is now Himachal Pradesh. The Kullu and Parbati Valleys, and the Kangra and Chamba regions make up this hill State. However it was precisely its mountainous character and cool climate that attracted the British to it. As a result a railway line to Shimla was built in early 20th century. This was later followed by one to Kangra valley. Though the State was initially formed in 1948 after independence, its current geographical spread only came about in 1966 when the *pahari* speaking regions of Punjab (Kangra, Kullu, Lahaul, and Spiti) were added on to Himachal Pradesh. Shimla, its capital city, was discovered by the British in 1819, and was made the summer capital of the country in 1864. Apart from the seat of Himachal Pradesh's government, Shimla is an important educational center and continues to be an important tourist attraction.

HP is industrially backward and agriculture and horticulture (seed potatoes, ginger, apples, wheat, maize, paddy) provide employment to 71 per cent of the population. Industries (cement, foundries, resin, turpentine, breweries) are located in Nahan, Bilaspur, Solan and Parwanoo. Hill stations and wildlife provide tourism potential and there are airports in Bhuntar, Jubbarhatti and Gaggal. Kangra is the largest in terms of population, followed by Mandi and Shimla. The decadal (1991-2001) rate of population growth is 17.53 per cent and urbanization is low at 9.79 per cent. The literacy rate is 77.13 per cent, 86.02 per cent for males and 68.08 per cent for females. There are around 28,000 SSI units, apart from cottage and village industries.

Annual Growth in the 1990's

Variable	Growth rate *	Variable	Growth rate *
Population	**1.6**	GSDP	5.3
Literacy*	1.3	Agriculture GSDP	4.0
Female literacy*	1.6	Manufacturing GSDP	10.7
Forest cover	1.1	Finance GSDP	15.7
Poverty*	-3.5	Commercial Bank Deposits	13.6
Two wheelers	**10.8**	Commercial Bank Credit	10.7

*Annualized percentage point changes

Growth rates in Himachal Pradesh show that the State is progressing faster and in the right direction than most States. Except for commercial bank credit, growth rates are better than median rates for all variables. Population is growing at a rate slower than the median State. Poverty is declining with a quick pace, much faster than all other States.

Literacy levels are improving moderately. While finance and overall GSDP are growing at rates marginally higher than the median, agriculture and manufacturing GSDP are significantly higher. Overall, among all the States considered, Himachal is the fastest progressing State. Himachal's potential for growth comes across clearly from these figures. Whether this potential actually materializes is a question that the future will answer.

Jammu & Kashmir

Jammu & Kashmir is the northernmost State in India. The State of Jammu and Kashmir consists of three zones – Jammu, Kashmir Valley, and Ladakh. Jammu and Kashmir has 14 districts, 6 are in Jammu, 6 in Kashmir and 2 in Ladakh. Measured in terms of population, the largest districts are Jammu, Srinagar, Anantnag and Baramula, in that order. Srinagar is its summer and Jammu its winter capital. Srinagar is located in the heart of the Kashmir valley. Traditionally famous for its natural beauty, tourism was one of its most important economic activities. Of course, this has taken a major downturn since the start of the insurgency. The State has wide economic, and cultural contrasts between its various regions. The largest part of the State comprises the Ladakh region, which is separated from the rest of the State by the Zanskar mountain range. Much of Ladakh is above the tree line. The people of Jammu too have different backgrounds than those in the valley and Ladakh. They speak different languages like Dogri and Poonchi.

The decadal (1991-2001) rate of population growth is 29.04 per cent, urbanization is 24.88 per cent. The literacy rate is 54.46 per cent, 65.75 per cent for males and 41.82 per cent for females. 80 per cent of the population depends on agriculture (rice, wheat, maize, barley, gram). Handicrafts (carpets, shawls, papier mache, wood carving) provide employment to 200,000 people and earn foreign exchange. However, in the 1990s, tourism has been adversely affected because of disturbed conditions. There is also the Sawalkote hydel project on the Chenab. There is a project to upgrade into four lanes the Srinagar-Jammu National Highway, the only surface link between the Kashmir valley and the rest of India.

Annual Growth in the 1990's

Variable	Growth rate *	Variable	Growth rate *
Population	2.6	**GSDP**	.
Literacy*	.	Agriculture GSDP	.
Female literacy*	.	Manufacturing GSDP	.
Forest cover	0.0	Finance GSDP	.
Poverty*	-2.7	Commercial Bank Deposits	14.6
Two wheelers	**11.3**	Commercial Bank Credit	12.5

*Annualized percentage point changes

Regions
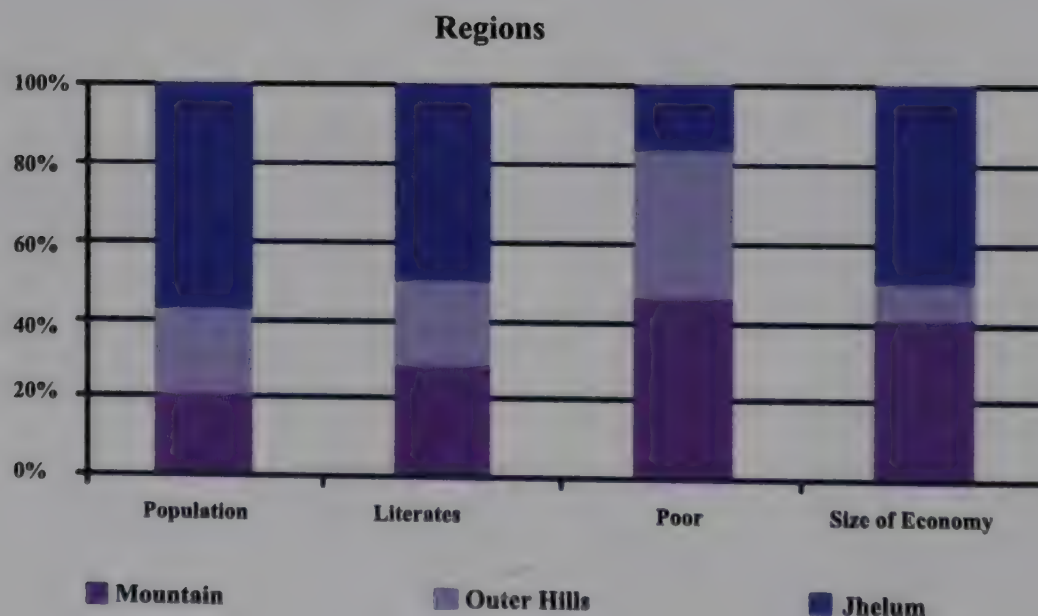
Growth rates are not reported for many variables due to lack of data in the mid 1990's. Population is increasing at a very high pace. Poverty is reducing at a rate much higher than most other States. Commercial bank credit and deposits are also growing at rates higher than the median.

The mountainous region of Jammu and Kashmir contains one-fifth of its population but almost two-fifths of its economy. Its share in literates is higher, but so is its share of poor; while it accounts only for about 20 per cent of population, it has almost half of the poor in Jammu and Kashmir.

The region named 'Outer Hills' has an economy size proportional to its share in population, however poverty levels are quite high in this area too. The Jhelum region has the highest share in population. It contains almost sixty per cent of J&K's population but contains only a 50 per cent share in the economy. However prosperity levels are quite high in this region with only about 15 per cent share of the poor in J&K. Conversly the Mountain region has a much more unequal distribution. It has only 20 per cent of J&K's population but around 45 per cent of poor and 40 per cent of share in the economy.
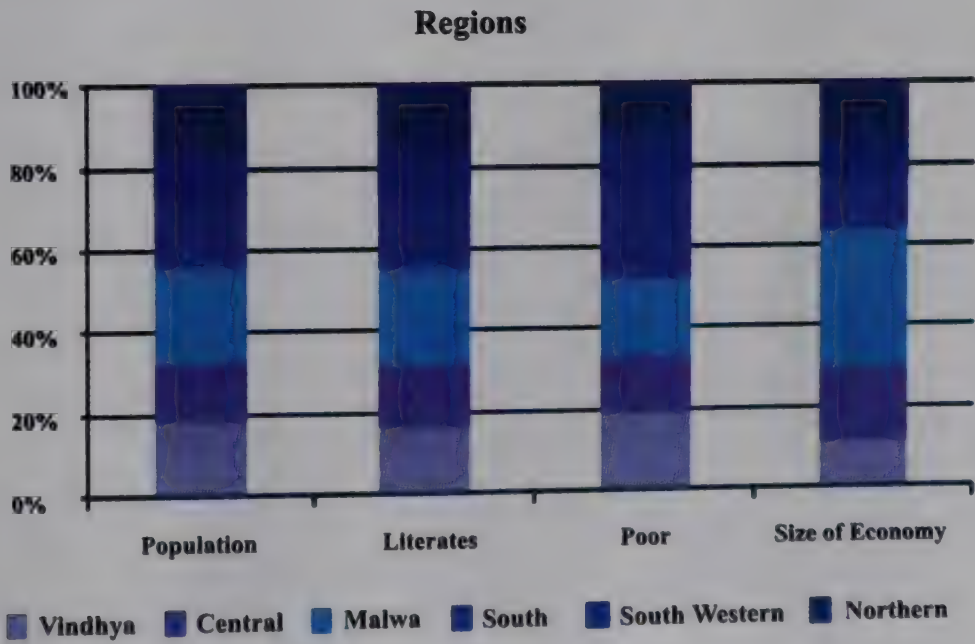
Madhya Pradesh

Undivided Madhya Pradesh has historically been one of India's poor and backward States, accounting for the MA in the acronym BIMARU, although there is some evidence that MP is climbing out of the traditional BIMARU fold. The decadal (1991-2001) rate of population growth is 24.34 per cent, urbanization is 26.67 per cent. The literacy rate is 64.11 per cent, 76.80 per cent for males and 50.28 per cent for females. Of the 45 districts, the largest in terms of population are Indore, Jabalpur and Sagar, in that order. In November 2000, Chhattisgarh was formed out of MP. Agriculture (49 per cent of the land area is cultivable) and tourism have potential, but infrastructure (especially roads and air links) is a problem. However, power (hydel and thermal using low-grade coal that is abundantly available) projects are being built, as is an Institute of Science with emphasis on biotechnology, bio-informatics, genetic sciences and bio-medical engineering.

There are also mineral resources and traditional handicrafts and handlooms (Chanderi and Maheshwar). Industries include telecom, electronics, automobiles and ancillaries and the public sector. An air cargo complex and inland container depot are being planned in Pithampur and Indore will become a Special Economic Zone. The Malwa region of MP is its most important economic region. It has a strong industrial base.

Annual Growth in the 1990's

Variable	Growth rate *	Variable	Growth rate *
Population	**1.9**	GSDP	3.3
Literacy*	0.1	**Agriculture GSDP**	**2.4**
Female literacy*	**2.1**	Manufacturing GSDP	5.8
Forest cover	-0.6	**Finance GSDP**	**16.9**
Poverty*	-0.6	Commercial Bank Deposits	9.4
Two wheelers	9.9	Commercial Bank Credit	7.7

*Annualized percentage point changes

Regions

Madhya Pradesh is not performing well compared to most States. Its position is however better than Chhattisgarh. It performs its best in the law and order categories and also in environment. Population is increasing at a pace marginally faster than the median and poverty is reducing at a pace much lower than the median State. Growth rates of agriculture

and finance GSDP are on a rise, but manufacturing GSDP and overall GSDP are not rising at a good pace. If this continues this State's relative position will fall further. The new State of MP is made up of five regions. The largest contributor to population is the Malwa region. This is closely followed by Vindhya and the Northern region. The Central and South Western regions contribute almost equally. The distribution of literates is almost identical to that of population, though there are proportionately fewer literates in Vindhya and proportionately more in the Southern region. In the Northern region the number of poor are proportionately lesser than the population size. The South Western, Southern, and Vindhya regions have more than proportionate number of poor. Malwa and Central regions all have a share in economy which is proportionately higher than their population size.
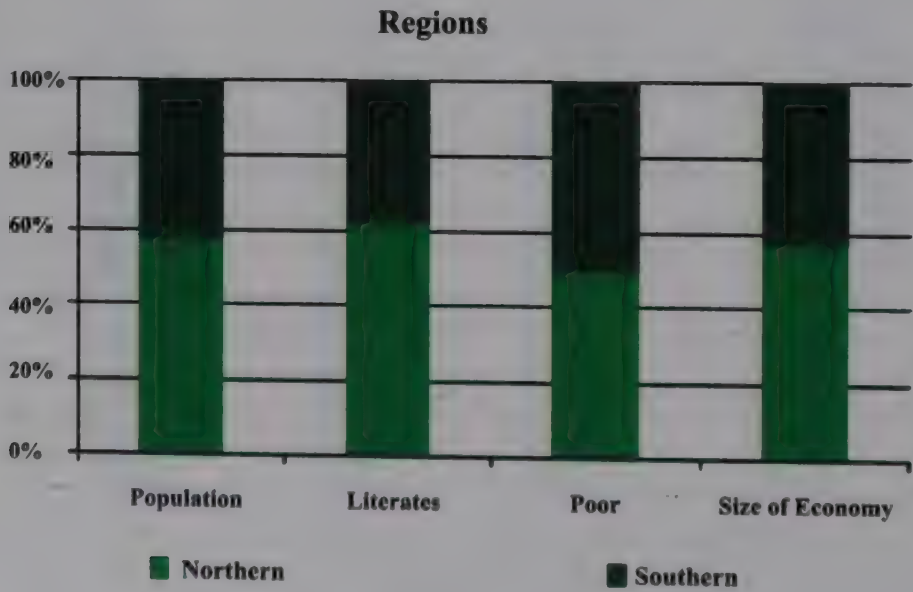
Punjab

Punjab literally means the five rivers. Though now only two of the famed five rivers flow through the State, they are an extremely important part of the Punjab. Agriculture is the main economic activity of the State, and the main occupation of its people. It forms the backbone of the State economy. It has been claimed that more than 80 per cent of Punjab is cultivated land in one form or another. With a land area of less than 2 per cent of the rest of the country's, it accounts for almost half of India's rice production, three fifths of wheat production, besides being a significant producer of maize, pulses, sugarcane, and cotton. The principal industries include the manufacture of textiles, sewing machines, sporting goods, starch, fertilizers, bicycles, scientific instruments, electrical goods, and machine tools, and the processing of sugar and pine oil. It has a famed small engineering industry. Punjab has developed a network of about 30,000 miles of roads, of which about 75 percent are surfaced. A fairly dense and efficient network of the Northern Railway zone—a part of the national railway system—exists in Punjab. With its large affluent rural population Punjab is one of the most important markets for a host of consumer goods. Its urban areas also contain a large base of textiles and related products, engineering, and food products among others.

Annual Growth in the 1990's

Variable	Growth rate *	Variable	Growth rate *
Population	**1.8**	**GSDP**	**4.4**
Literacy*	**1.1**	Agriculture GSDP	1.0
Female literacy*	**1.3**	Manufacturing GSDP	4.9
Forest cover	1.3	Finance GSDP	16.1
Poverty*	-1.0	Commercial Bank Deposits	11.8
Two wheelers	9.9	**Commercial Bank Credit**	**11.8**

*Annualized percentage point changes

Regions

Punjab exhibits moderate growth rates in almost all the sectors. Population and literacy are increasing at rates marginally higher than the median State, though poverty decline is not keeping up that well. Growth in production is also not impressive, except for finance GSDP, in which case Punjab is performing much better. Forest cover in Punjab is improving at a rate much better than in any other State. While deposits are not increasing at a high rate, credit is

performing marginally better than compared to rates in other States. The Northern and Southern region of Punjab share the economy proportionally to their respective population sizes. However the Southern region that has proportionately less literates, has a larger share of Punjab's poor. Illiteracy coexists with poverty with higher disparity. Overall, Punjab has been one of the more successful Indian States in ensuring low levels of intra-State or sub-State disparities.

Rajasthan

Rajasthan is located in the northwestern part of India. It is bounded on the west and northwest by Pakistan, on the north and northeast by the States of Punjab, Haryana, and Uttar Pradesh, on the east and southeast by the States of Uttar Pradesh and Madhya Pradesh, and on the southwest by the State of Gujarat. This is the largest State in the country with an area of 132,140 square miles (342,239 square kilometers). In the west, Rajasthan is relatively dry and infertile; this area includes the Great Indian or Thar Desert. In the southwestern part of the State, the land is wetter, hilly, and more fertile

Rajasthan brings up the 'R' in the BIMARU States. However, its performance has been much better than its peers in that league. It appears to be catching up on the better performing States to its North and South. Rajasthan is making fast progress on the agriculture front, one of the primary factors being the Rajasthan canal that has already helped transform the north-western part of the State. The proximity of the State to Punjab and Haryana has also enabled it to benefit from the dispersion of better agricultural practices. Another important economic activity in Rajasthan is tourism.

Whether its eastern part (Jaipur) or western (Bikaner-Jaisalmer) or southern (Udaipur-Chittor) parts, Rajasthan possesses great tourism potential and has used it for economic gain. The manufacturing sector of Rajasthan has essentially been set up in the post-independence era. Key manufacturing areas include those in the eastern part of the State. Being between the large markets of western India and those in the north-western part of the country may have helped.

Annual Growth in the 1990's

Variable	Growth rate *	Variable	Growth rate *
Population	2.5	GSDP	2.2
Literacy*	2.2	Agriculture GSDP	-0.4
Female literacy*	2.4	Manufacturing GSDP	-1.2
Forest cover	1.1	Finance GSDP	15.3
Poverty*	-2.5	Commercial Bank Deposits	12.8
Two wheelers	12.5	Commercial Bank Credit	13.7

*Annualized percentage point changes

Regions
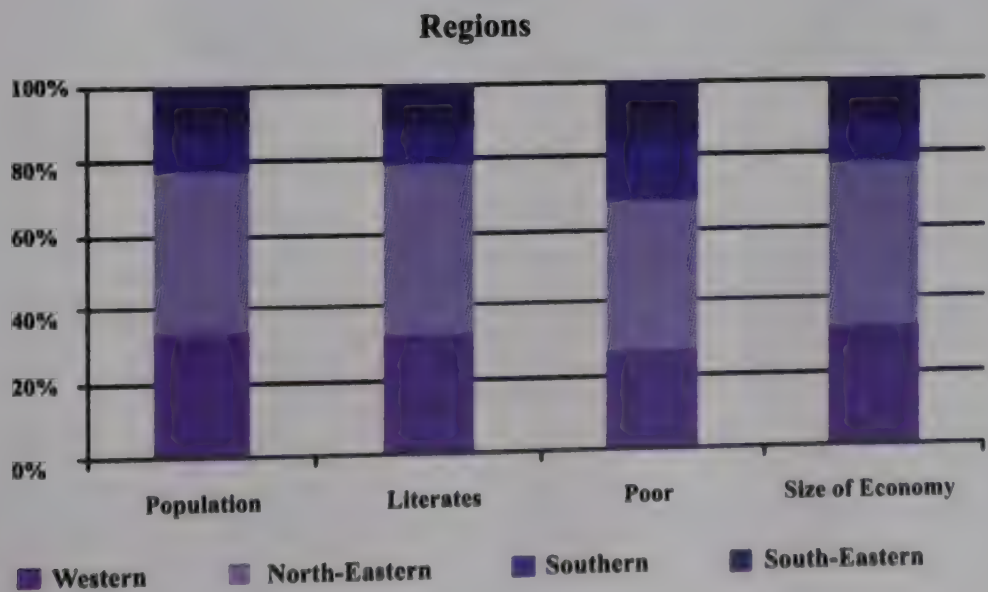
Population in Rajasthan is increasing at a very high rate. A reassuring factor however is the literacy level that is also increasing at a high rate. Female literacy is increasing at the highest rate among the large States. While GSDP from agriculture and manufacturing sectors is declining, finance GSDP is increasing at a high rate. Overall GSDP is increasing at one of the lower rates. However, poverty levels are declining at a good pace. Deposits and credit in scheduled commercial banks are performing moderately well. Forest cover has been increasing at a good pace as well.

At the sub-State level, the regions of Rajasthan share the economy almost proportionally to the population size. Though, the South Eastern and Southern regions get a marginally higher share of the poor, which they take away from the North Eastern and Western regions. The Western and Northeastern regions are more prosperous than the other regions given proportionate share in the economy and literates but a smaller share of poor.

Uttar Pradesh

The largest State of India in terms of population, Uttar Pradesh today consists of six different regions. The State forms the heart of North India. It has a very fertile land and forms the bulk of the Ganga river plains. Apart from the Ganga, Ganga, Yamuna, Ramganga, Gomati and Ghaghara are its major rivers. Kanpur, Lucknow, Banaras, Allahabad, Meerut, and Agra are some of its most important cities.

UP has a rich agricultural tradition with Paddy, Wheat, Barley, Jwar, Bajra, Maize, Urad, Moong, Arhar, and Gram being its major crops. Mango, Guava, and Apple are some of the major fruits grown in the State. Its industry produces significant amounts of Cement, Vegetable oils, Textiles, Cotton yarn, and Sugar. Chikan work, Zari, Wooden toys and furniture, Terracotta toys and Brass work are some of its key handicrafts.

The eastern part of the State is predominantly agriculture oriented, its western part is more industrialized. The western part of the State is economically more developed and has a large industrial base. It is well connected to Delhi and therefore gains from its proximity with the most important trading and commercial center of the North. The eastern part of the State however is less fortunate.

The State has a very old tradition of higher education, entrepreneurship, and large markets. All these factors notwithstanding, the State has not done as well economically as would be expected given its potential.

Annual Growth in the 1990's

Variable	Growth rate *	Variable	Growth rate *
Population	**2.0**	**GSDP**	**5.5**
Literacy*	2.0	Agriculture GSDP	3.0
Female literacy*	1.3	**Manufacturing GSDP**	**9.2**
Forest cover	0.0	**Finance GSDP**	**17.6**
Poverty*	-2.1	Commercial Bank Deposits	13.2
Two wheelers	10.4	Commercial Bank Credit	9.2

*Annualized percentage point changes

Regions
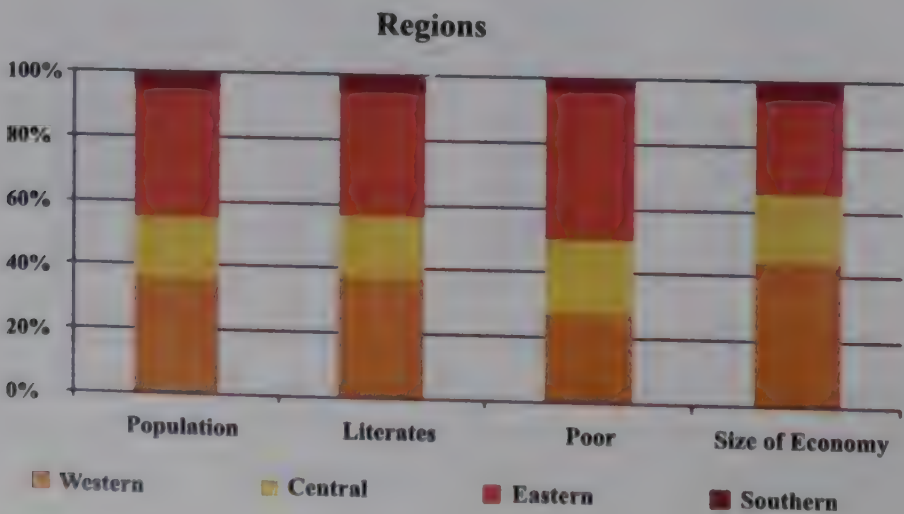
UP has the largest population in India and it continues to grow at a high rate. Overall literacy level is increasing at a higher rate than most other States, but female literacy is not improving that well. Production on the whole has been increasing at a good pace. In all the sectors of the economy the growth rates are quite higher than the median State.

The Eastern region of the new State of UP is the largest contributor to its population. It also has a proportionately higher share of poor than its population. This accompanied with a proportionally smaller share of the economy causes it to be a major cause of concern to UP. All the other regions have a proportionately higher share of the economy than their population size. Southern region has proportionately more literates and lesser poor, Western region has a share of literates equal to its share of population accompanied with a much smaller share of poor. The Central region appears to be very disparate with proportionally larger share of the economy and also a larger share of the poor than its population would warrant. The Western region has the largest share of the economy.

Uttaranchal

Uttaranchal became a full-fledged State of India on the 8th of November 2000, with the formal induction of a separate State Government. Carved out of Uttar Pradesh, which has the largest population in India, Uttaranchal is located in the northwest portion of Uttar Pradesh. It has a population of about 6.0 million at 94.4 per sq. km.

Uttaranchal borders Tibet, Nepal, Himachal Pradesh, and the UP plains districts. Dehra Dun, the State's capital is about 255 km away from India's capital, New Delhi. The State has a rich hydro-electric potential, though much of it has not been used as yet. The new State is an attractive tourist spot. However this sector is not fully exploited, and investments, private and public are required to construct the necessary tourist infrastructure before it can become an international tourist destination. Agro industries are another area of great potential. The climate in the State allows the growing of fruits, essential for this industry. Commercial production of fruits, medicinal plants and flowers on the lines of Himachal Pradesh will go a long way in boosting its economy.

The State performs much better than its sister State of Uttar Pradesh, in almost all sectors. This is on account of good educational institutions, low population density, and important resource base. Uttaranchal is expected to only do better in the future.

Regions
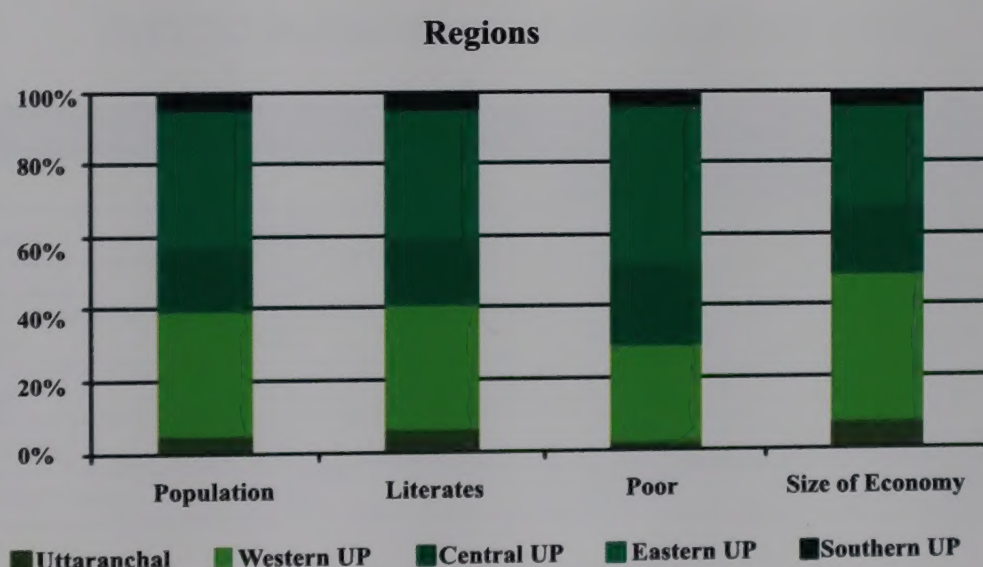
The growth rates for the new State of Uttaranchal could not be calculated due to the paucity of data. Above, we report the rates for the (combined) State of Uttar Pradesh. It is likely that Uttaranchal's performance would be better than that reflected in the above numbers. But for that we would have to wait for coming years.

Uttaranchal is roughly one sixth the size of old State of UP in terms of its geographical area. This is true even of its population size. However it has a larger share of literates and fewer poor than its population would warrant. Its share in the economy of the old State of Uttar Pradesh was disproportionately higher than its population size as in the Western and Southern regions of UP. It is possible for Uttaranchal to come up better than the other regions of old UP in the future as it now enjoys the Status of a separate State.

Delhi

New Delhi, India's capital, is one of the fastest growing cities and markets in the country. What was essentially a sleepy capital has today become India's most important market. Aided initially by a large number of government employees, the immigrants from Pakistan, the economic success of the agricultural belt in northwestern India, and a large presence of small industries, Delhi today has very high affluence levels. For many commodities such as automobiles, Delhi is also India's largest market. Perhaps because of its status as a capital, Delhi has one of the best infrastructure penetrations in the country. Though Delhi is essentially an urban centre, it has a large rural area on its outskirts. Recently accorded the status of a State, Delhi's economy is only expected to become more important in coming years.

Annual Growth in the 1990's

Variable	Growth rate
Population	3.9
Literacy*	0.7
Female literacy*	0.8
Forest cover	.
Poverty*	-1.3
GSDP	8.2
Agriculture GSDP	-1.7
Manufacturing GSDP	-1.1
Finance GSDP	23.5
Commercial Bank Deposits	13.3
Commercial Bank Credit	15.3
Two wheelers	6.4

*Annualized percentage point changes

PHDCCI Monthly Bulletin

The PHD Chamber Bulletin is a monthly publication, recognized not only as of trade, industry and economy of corporate India, but also as a very useful medium of information. The bulletin, besides containing regular Chamber activities, also contains articles from select experts from various fields, industry updates and special features on topical issues.

Every month, the 2000 copies of the Bulletin are circulated amongst 1700 Industries and senior officials in the Government of India, Ministries, State Governments and the Chambers of Commerce and Associations in over fifty countries, Including all our members. The Bulletin also enjoys readership in the Diplomatic Missions and Embassies in New Delhi and is subscribed by libraries of some of the noted Institutes and Universities of the country.

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PHDCCI is a private non-profit organization devoted to industrial growth, independent research and policy solutions. It is an industry led and industry managed organization, playing a proactive role in North India's development process. PHDCCI analyzes current and emerging issues and produced new ideas that take the reform process forward. PHDCCI members provide the highest quality research, policy recommendations, and analysis on the full range of public policy issues. Research at PHDCCI is conducted to inform the public debate. Its office bearers, the President and the Vice President, are leading industry leaders who devote more than two years of their time to guide the Secretariat in its activities.

PHDCCI traces its beginnings to 1905, when a group of leading reformers founded the first business chamber in North India, a private organization devoted to analyzing public policy issues at the national level. PHDCCI is financed largely by its members, corporations, and private individuals. The Chambers funds are devoted to carrying out its research and educational activities. PHDCCI works to create and sustain an environment conducive to the growth of industry in the eleven states of North India, partnering Industry and government through advisory and consultative processes.

PHDCCI is the leading business support organization in this area of Northern India that contributes to more than 40% of India's exports and is among the fastest growing industrial areas in the county. It is guided by its defining principles of ethical business methods, corporate governance and social responsibility. The Chamber works through two independent foundations, the PHDCCI Rural Development Foundation and the PHDCCI Family Welfare Foundation, in the areas of education, health care, environment and energy to foster sustainable development in the country.

In it's history of a little more than 100 years, PHDCCI has emerged as North India's premier business association, with a direct membership of over 1500 organizations form the private as well as public sectors, including SMEs and MNCs and reaches more than 60000 organizations through its 140 Association members and 175 Professional members covering national and regional sectoral associations. It provides a broad range of services to its members helping them enhance productivity; improve efficiency and network with domestic and foreign partners. With 6 offices in India and institutional partnerships with a large number of counterpart organization in various countries, PHDCCI serves as a reference point for Indian industry and the international business community.